THE LITERARY GAZETTE

AND

Journal of the Belles Lettres, Arts, Sciences, &c.

No. 1753. LONDON, SATURDAY, AUGUST 24, 1850. PRICE 4d. *Stamped Edition, 5d.*

NOTICE.

In our present No. we have completed our report of the proceedings of the Edinburgh Meeting of the British Association, and our Abstract of the papers read before the various Sections. We have given also our correspondent's account of the meeting of the British Archæological Association up to Thursday evening, but are compelled, for want of space, to reserve for our next No. the few papers read during the meeting sufficiently interesting to our readers to warrant their insertion.

REVIEWS OF NEW BOOKS.

GERMANY.

Germania; its Courts, Camps, and People. By the Baroness Blaze de Bury. 8vo. 2 vols. Colburn.

If we were now to ask what's in a name, that on the above title-page would almost frighten us. But we have got beyond the age of superstitions, in spite of Mrs. Crowe (another coincidence in sound!) and instead of fear we take pleasure in hearing the Baroness blaze away at the Anarchists, and after she has destroyed the pestilent rascals, bury them with as little honour as if they were drowned kittens. Her epigraph intimates the nature of her work. It quotes the speech of Donoso Cortes, on the 30th of January last, and thus pithily paints the lucubrations and doings of our quondam legislators at Frankfort:—

"Here is the history of the German Assemblies. Do you know why they died as they did? I will tell you.—They died because they neither acted nor let others act; they died because they neither governed nor let others govern; they died, because after more than a year of discussion, nothing arose, or there rose only vain vapour and smoke, from all their interminable discussions."

On this text the author dilates, and certainly gives us a miserable picture of many men and factions who have agitated Europe, and respecting whom very different representations have been most current amongst us in England. France alone, she says, has accomplished the degradation at which German, Polish, Italian, and Hungarian revolutionists aimed; and these she rates infinitely below the most republican liberals and zealous reformers—within the lowest depths a lower still. Confusion, rapine, and bloodshed were their objects; and their measures as contemptible as their desires were monstrous.

The whole of Germany is surveyed and scanned. Baden and its patriots, Hanover, Bavaria, and Munich, Prussia and Berlin, Austria and Vienna, Hungary, Servia, Styria, Italy, France, and at last Venice and Byron, and Verona and Shakspere. On all these heads we have politics, portraits of prominent persons, sketches of society, and we cannot enumerate what else besides: the volumes are indeed a perfect mine of the *totidem rebus et quibusdam aliis* kind, and the Viewer, who cannot be expected to produce a sample of every sort, has but to dip his hand in any corner to find something which will exhibit the writer in a fair light, and (as we think) be curious and interesting for general readers. To begin, we have a description of one of the most popular and powerful leaders of the German movement.

"Gagern (we are told) was the man of the Parliament of Frankfort, as Radowitz was that of the Parliament of Erfurt. There was no measure to which he could not persuade, no tumult that he could not master. '*Jupiter tonans*,' that was the name by which he went amongst his colleagues of the *Paulskirche*, and often he did not even require to raise his storm-quelling voice, but needed only to look. When Gagern declared, on the 24th of June, 1848, that no private individual could possibly be called to the head of the Central Power, he virtually abdicated that power for himself, for he was as well aware as were those around him, that, had it not been for that famous speech of his, in which he proved that the Chief of the new State must of necessity be a Prince, he himself would have been elected to that dignity.

"No enthusiasm excited by either the Archduke John, or the King of Prussia as future Emperor of Germany, equalled that inspired by the President of the National Assembly. In the streets, in the Assembly, and in society, his influence was the same. Women would tear a glove of his into atoms, and preserve the bits as relics; nay, one noble lady whom I could name, wore one of his sleeve-buttons mounted in diamonds.

"'I shall never forget him,' said to me one of the cleverest women I ever met, 'upon the day when, suddenly leaving his Presidential chair, he mounted the tribune, and gave his magnificent speech upon the Protectorship of the Empire. I left the *Paulskirche* with the sound of his magic tones ringing in my ears—he was superb!'*

"Of the great services rendered by Gagern, there can be no doubt; but, like most men who have been called into action by a Revolution, the Revolution had exhausted his resources before he had been enabled to do any more real good than that which lay in prevention of still further evil. Gagern is now worn out, his royal brow is furrowed, his sable hair grey, his firm step slackened, his majestic figure bent, and his splendid, perhaps unparalleled, voice veiled. The Gagern of the *Paulskirche* is no more, and the Gagern of Gotha and Erfurth has certainly nothing which can compensate for the loss."

From the personal we shall turn to the description of a town, and select Leipsic, recommended to us as a *depôt* of literature. But the Baroness tells:—

"'I must do honour to my excellent Leipsic,' says one of Göthe's students in the *Faust*; 'it is a little Paris, and knows how to make something out of a man.'

"A '*little Paris*' is perhaps *un peu beaucoup*, as our neighbours express it, but that Leipsic is a town perhaps unique in Germany is very certain, and it is better it should be so, for if there were many such places, it would be hard to say for whose advantage it might be. Mephistopheles, in the scene to which we have already alluded, gives the truest picture of the Leipsickers, in the following words:

"'Every day is a holiday; with small wit and less comfort, each one turns round in his narrow circle, like a young cat after its tail. When they have not got the headache, and that the host will go on giving credit, they are happy and at ease.'

"This *is* Leipsic, the very kernel of the democratic nut, the capital of professor-ism (I must coin the word), and the headquarters of *Studentenwesen*. A town of books and *Burschen*, of drinking-cellars and printing-presses, where the fumes of ill-directed, ill-digested knowledge, mingle with the fumes of beer and Rhenish wines, and together form a mass of steam, for which the safety-valve is not so very easy a thing to find. Though it is, after all, but vapour and smoke, still it condenses sometimes, and it may burst, as it has already done.

"If the broad streets and fine places, the open squares and handsome walks, but, above all, the spacious, well-planted Boulevards which surround it, may, in some degree, warrant the comparison of Leipsic with a diminutive Paris, there is something which far more gives it a point of resemblance with the godless city of disorder—I mean the unruly spirits it contains. No sooner have you set your foot in Leipsic, than you feel you are in a different species of town from those where you have latterly been. You may feel free, but you do not feel quiet. You are no longer in traditional Germany, you are in a centre of activity, commerce—and *strife*. Politeness is banished here, the inn waiter is, as in America, a kind of '*help*,' and thinks himself your equal. If you happen to look into the *Speisesaal* for a newspaper (of which there are at least ten dozen lying about), you see the tables occupied by spectacled men, with pale faces and dirty hands, to each one of whom his neighbour says: '*Herr Doctor*.'

"Go into the booksellers' shops, and the man behind the counter talks politics to you, as though you must in the natural course of things, be a radical. One of these worthies wanted to tempt me into buying a collection of portraits representing the Rebel Chiefs of the Hungarian insurrection. Somehow or other, the lithograph of Haynau had got amongst the rest; and when the printseller saw this, he put on a look of indignation. 'What a damnable face!' said he, 'is it not?'

"The most interesting thing in Leipsic, after Auerbach's Keller, is the printing establishment of M. Brockhaus. The proprietor himself was kind enough to do us the honours of it, and conduct us over every corner of his little world, for it is a world. Six or eight hundred men are employed in this vast establishment, where everything, from the labours of the foundry up to the costly binding of priceless books, is done that is necessary for the launching of these frail vessels upon the sea of publicity. M. Brockhaus is a great man, and a patriarch, in his way; and with his calm, quiet manner, and his pen behind his ear, has infinitely more to do than the Prime Minister of many a petty Prince. You go from room to room, and no heed is taken of you. Silent, intent, serious and pale, men by tens and twenties are *at work*, some bending over the metal characters which are to dress words and clothe ideas, and of which he who arranges them cannot pause to seize the sense; others, tearing the hot, reeking sheets from off the untiring roller of the press; whilst others, again, in far distant chambers, wipe from their brows the drops called forth by the heat of the blazing furnace, and all day long, hour after hour, listen to the blow of the hammer upon the anvil.

"But in all the several chambers of this endless

* "This was the speech so celebrated under the name of the '*kuhnen Griff*,' meaning literally, a sharp clawing hold of the business."

building, on the sill of every casement that lets light into this human hive, is to be found the same witness of man's eternal love for something that he can watch over and take care of. In every window stand two or three pots of ivy, curiously trained; sometimes made to twine its pliant tendrils round osier twigs, bent into rounds or ovals, or tied into the form of a miniature palisade; but everywhere, in the midst of the oil and the iron, the fire and the grease, these green wreaths of ivy gladden the eyes of the toilers.

"'They like it so,' said M. Brockhaus to us, as we remarked the circumstance. 'It is company.'

"Company! yes, there it is. Let man's toil be what it may, there is in him a yearning for something *out of himself*, for what is *not* material; and I know of few things more touching than this association of rude, hard labour, with what is purely poetical and devoid of positive utility, this instinct which makes hard-working men seek for 'company' in the mute verdure of an ivy plant.

"A Frenchman has as a companion a cat or a mouse, a dog or a weazel, it matters little which, so long as it has life. A German finds consolation and 'company' in a plant; which does not exactly prove one to be better or gentler of spirit, but simply more *unreal* than the other.

"Half of these men in M. Brockhaus's *ateliers* were, I have no doubt, in the fight put down by Prince John of Saxony, in 1846, and most of them probably know by heart the incendiary verses written by Freiligrath upon that occasion,* but that does not prevent them from finding enjoyment in long walks through the fields, or from listening enraptured to a melody of Weber's. They are *unreal* and fantastical, *voilà tout.*"

Our next is a brief but clever general characteristic:—

"Want of *practicalness*, that is the curse of the Northern Germans; and it is so in-born in them that it finds its place in all they do. Some show it in one way, some in another. Some conspire against the State, and read Klopstock, or cultivate cabbages; others talk of overthrowing monarchy, who could not give up their taverns and pipes; whilst others, again, are music or painting-mad, and would miss three quarters of the preliminary meetings necessary to the concoction of a serious conspiracy, sooner than be absent from the circle of some choice spirits who should assemble to play quartettes, or draw figures in charcoal. The *Künstlerwesen* is as deep-rooted in these towns as the *Studentenwesen*; and in this want of practicalness lies precisely that which has prevented the revolts of Northern Germany from becoming revolutions.

"The Badeners were not practical either; but the particular proof of their political incapacity lay in the wildness of the theories they had adopted, and not in any want of method in their prosecution of those theories. They are equally *un*real with the others, but they have fewer subjects of distraction; they are far less convivial, and a degree more brutal. The Northern German derives his unpractical spirit from two causes: *schwärmerei* and *liederlichkeit*. The first is a kind of dreaminess, which, allied to genius, produces Jean Paul, but which, muddying and confusing an ordinary brain, unfits for all healthy action. The second is a morbid love for pleasure of every kind, for pleasure without elegance, for the pleasure which degrades. 'Such a one is a *liederlicher Kerl*,' is a phrase often used in Germany; for, alas! the thing too often exists. A *liederlicher Kerl* means a being in whom there is neither solidity nor coherence; a being without weight, and in whom nothing hangs together, if I may so term it. He knows a little of many things, and holds forth upon all; and does a little of everything, except his duty, of which he never thinks."*

At Munich the famous Lola Montes does not seem to be as ill spoken of as elsewhere. The writer, though a Roman Catholic, rather applauds her, and says:—

"I should like to make a remark to you upon this subject which you may have omitted to make to yourself in the ardour of your virtuous indignation against Madame Lola; and that is how very inconsistent we all are to be interested in Rosamond Clifford when she lives in the twelfth century, and to revile her when she appears in the middle of the nineteenth. Have you ever thought of that, reader?

"Now, it is *not* the disgust for the one that I would have diminished, it is the taste for the other. Rosamond, I have no doubt, was a most worthless young lady, and probably, if you heard the opinions given upon her by one of Queen Eleanor's ladies of honour, you would find out that Lola herself was no worse;† and yet, give a tragedy to-morrow called 'Fair Rosamond,' and you shall see how the best and purest ladies in the land will agitate their pocket-handkerchiefs, and vote Eleanor of Guienne a vile murderess, and call her a thousand hard names.

"And Anne Boleyn, *s'il vous plaît?* Who ever dreams of putting her in her right place?"‡

From Munich we pass to Berlin, and read as follows:—

"When you come direct from Vienna to Berlin, the change is, socially speaking, about as complete as it well can be. In the one, all is elegance and pleasure; in the other, nothing is thought too serious to be every one's habitual occupation. The most abstruse questions are looked upon as mere 'daily bread;' and for the finer condiments of existence, you must have recourse to the most nebulous speculations of transcendental philosophy. The clever author of 'La Philosophie du Droit,' Lerminier, has said, truly enough, in his 'Lettres d'un Berlinois,' 'Ils ont l'habitude de l'infini;' and this is unluckily correct. In the first place, it makes them pedantic; and in the next, it renders them *unpractical*. They have all of them, more or less, their Utopia; and if this produces eccentricity amongst the women, and those of the other sex, who remain within the sphere of private life, in the more stirring amongst the men, it has gone nigh to produce irretrievable mischief to the State.

"I know of nothing more accurately descriptive of the school to which belong many more than mere revolutionists in the north of Germany, than the following *Steckbrief*, or advertisement, to aid in the apprehension of a man convicted of high treason: 'He is of the Lutheran Confession, and of middle height,' so runs the document, 'strongly built, and of healthy aspect, with a high forehead, and a long nose; he has fair, curly hair, and has studied theology in Leipsick!'

"Well done for an intelligent *Steckbrief* that will catch neither thief nor traitor, for it gives the portrait of the whole genus! So are they *all*, more or less. * * *

"I will not affirm that the ladies of Berlin are *too blue*, but they are '*woundy learned*,' as Tony Lumpkin says, and it is lucky for you if you do not find yourself called upon to decide a knotty point concerning literature in the days of Rhâmesès, even whilst you are sucking an orange at a *Damen Caffee*, or if you do not have the smoked Hamburgh beef rammed down your throat by an unexpected shot from Hegel or Kant. These *Damen Caffees*, where ladies assemble after dinner to discuss ham, chocolate, and psychology, are formidable things, let me tell you, and not to be encountered lightly. Corinne's *tea* was nothing to them, (I always suspected the cups filled by '*Miladi*,' whose name I forget, to have contained a great deal more milk and water than anything else), the coffee parties of Berlin are a very different sort of affair, and have a perfume of Molière and '*Les Femmes Savantes*,' to be scented a mile off."

At Vienna, the women are described as dancing mad, and the Waltz King as grim and terrible as King Death himself, claiming hecatombs of the youngest and fairest sacrifices; but still of the general society it is said:—

"I told you that people in Vienna were not book-learned, as in Berlin, that is, *there* does not lie their speciality (why not give the word *droit de bourgeoisie* at once? it is such a good one). The Viennese are, above all, people of the world, as the meaning of the word is in French, *gens du monde*—namely, people who before being anything else, are gentlemen and gentlewomen conversant with the habits, occupations, duties and diversions of the world in which gentlemen and gentlewomen are required to live. * * *

"These Viennese are a very strange race. With so much of our steady, honest qualities about them, they have, at the same time, an undeniable similarity of *esprit* with the French. They are lively as quicksilver, and witty as a *gamin de barrières*, with, I must admit, a great deal of his peculiar style of wit.

"In all these qualities they differ completely from the northern Germans, and I really can find a parallel nowhere for their delicious sallies and repartees, but in the repartees and sallies of the wittiest nation of the globe. But to appreciate this, it will not suffice to know the German language well, you must have a thorough knowledge of their own delicious dialect, and then you will probably be tempted to pass every evening at some *petit théâtre*, but, above all, at *Karls Theater*, in the Leopoldstadt Fauxbourg. Vienna is, at present, the home of the drama in Germany."

Another nationality is thus sketched:—

"If ever two nations were unlike each other in every respect, in manners, customs, opinions, habits, feelings, those two nations are the Austrian and Hungarian. I have said the former have many remarkable points of resemblance with the English, but for the latter I can find no parallel upon earth save the Irish. A Magyar and an Irishman are twin brothers. Both believe they sprang direct from Brahma's eyebrow, whilst in the firm conviction of both, the other wretched grovellers of the globe are at best but the produce of his great toe, and both draw (with one only exception) the same virtues and the same faults from their Asiatic cradle.* I have said with *one* exception. The Magyar race, unlike the Hibernian, is essentially, lamentably irreligious; or rather, there yet lingers about them, in this respect, a strange something, almost impossible to describe; a kind of unconscious, undefined idolatry; a 'reminiscence,' as Plato terms it, of a former state, when their deities were perhaps Ahriman and Ormuszd.

"It would require volumes, which I have no right to inflict upon you, my dear reader, to enter into all the various theories upon the origin of the Magyars, and the precise date of their immigration into the Pannonian lands; but it seems pretty well established, that they belong to that vast Tartaric family of the north-eastern portion of the globe, to which, even at the present hour, they bear such strong marks of resemblance.† Physiologically

* "M. Brockhaus, at the time of these riots, could not maintain order amongst his men: 'They are all possessed,' said he, in despair, to the gentleman who inhabited the house opposite to his; 'I can do no more with them—for Heaven's sake do you try!'"

* "Herein lies the difference between the Northern German, and the Austrian, whose mainspring in everything he does is the feeling of duty alone."

† "The wits of Munich had cleverly enough called the two parties,—Baron d'Abel's and that composed of the Countess's friends,—one, the *Ultramontane*, the other, the *Lolamontane* party."

‡ "To preserve to Anne Boleyn her poetic halo, one must refrain from reading any of the old French authors who speak of her during her residence at the Court of France."

* "See in the notes to Moore's 'Fire Worshippers,' the authorities quoted by him for believing that the Irish are of Gheber descent."

† "By far the most remarkable work that has appeared upon the origin of the Magyars is the posthumous one that has just been published of Endlicher's, entitled: 'Rerum Hungaricum Monumenta Arpadiana.' It is of most extraordinary interest and research."

speaking, their relationship to these Oriental races stares you in the face, and between a genuine Magyar, an Affghan, and the wild follower of the Circassian Schamil, it is evident that there has existed, at some time or other, a very close and intimate connexion. Many of his Oriental qualities the Magyar has preserved, but he has lost, by his contact with European civilization, the deep seriousness of the East, and is almost as full of inconsistency, and as incapable of severe intellectual application as a Pole. Some very learned men have even opined that there was gipsy blood in these strange enigmatical Magyars, who resist so invincibly the efforts of modern cultivation. It is certain that they have points of contact with these wanderers of Egypt, with these restless children of the sun. They are as given to horse and cattle 'lifting' as a Tartar or a Highland Catteran; and, indeed, at the same time that their resemblance with the Irish on almost every point strikes you, you cannot avoid recognising in some respects a likeness to the Scotch. They differ from the former, as I have said, in the fact of their being naturally irreligious; they differ from the latter in their utter want of thriftiness.

"But in the persistence of the aristocracy in their attachment to feudal institutions, in the exceedingly imperfect comprehension of the words *mine* and *thine*, manifested by the large majority of the Magyar population, and in the uneradicable propensity of all, upon all occasions, to take 'the law into their own hands,' there lies an undeniable trait of resemblance with our Highland 'chiefs' and their clans as they existed even down to the middle of the last century. The wide dissemination of the aristocratical element over the whole surface of the population, is decidedly more Scotch than Irish; for in the latter country the *people*, properly so called, are infinitely more numerous, whilst in the former it is difficult almost to find the man who is not a *laird*. But on the other hand the social habits and customs of the Magyar *noblesse* have almost all the characteristics of the corresponding class in Ireland. This word *noblesse* is one of wide signification in Hungary; and one may with great truth say of this strange nation, that '*qui n'est point noble, n'est rien.*'"

With this extract we conclude. We have steered as clear as we could of the politics with which the work abounds, and desultory as our quotations are, they can afford but a slight idea of its heterogeneous contents. That the author is lively, well-read, and observant, we need scarcely remark; and though her book is not one to sit down with and read doggedly through, there is plenty of miscellaneous matter in it, to take up and lay down, with entertainment to readers of every class.

SOUTHEYANA.

Southey's Common-place Book. Third Series. Analytical Readings. Edited by J. W. Warter, B.D. 8vo. Longmans.

THAT Southey was a gluttonous reader and an indefatigable annotator, had it not been well known before, would have been fully substantiated by this one volume. It, however, in this respect only proves a truism; and we must say that nine-tenths of it are good for nothing else. You may peruse page after page, and get no other information beyond the points in the author of which Mr. Southey jotted down the briefest memoranda to refresh his own memory, should he have occasion again to refer to the work in hand. But what intelligence can this convey to any third party? We are at a loss to answer the question; and, open the volume before us where we may, we find only such replies as the following. He is perusing Fynes Moryson, among other Anglo-Irish historians, and notes—

"35. Essex's account of the Irish people—as to their disposition. 36. He speaks of Cobham and Raleigh. 40. Elizabeth's reproach to him. 44. A crown of Phenix feathers sent by the King of Spain to Tyrone. 45. Character of Mountjoy. 49. Was this a son of Cranmer? 83. 63. The towns were the stores of the rebels, and stood so saucily upon their privileges, as a sharp rod and strong hand were requisite to amend them. 67. Bonnaghtes, or hired soldiers. Her Majesty pursued none in those parts for religion. 71. Bacon and Essex. 73. Tyrone's religion. 78. Complaints that the spiritual livings were given to ignorant and idle persons, being the chief cause of this rebellion. 79. Mountjoy. 89. 122. 124. 133. 138-9. 157. 196. 84. Moryson. 90. Base money. 150. 217. 97. Arrows with wild-fire. 109. Disposition of the people. 111. Garrous—that is carriage jades. 119. Vere at Ostend."

We open at random elsewhere, and under the head of "Miscellaneous," "Foreign," "Aitzema," and "Silvius"—

"719. Duke of Brunswick's library. 897. Letter signed Jael, from the wife of a regicide. 907. According to him there were only three ministers in London who conformed. Vol. 5. P. 746. Fire of London. Vol. 6. P. 69. Plante had an honorary degree given him at Oxford, 1667, when he was addressed as 'Sionis simul et Parnassi vates.' 597. The Pope's behaviour to Neville. SYLVIUS, *in continuation of Aitzema*—1669 *to* 1679.—P. 7. An earthquake in Persia attributed to burying a Scotchman there. 32. Affonso VI. Brito Freire. 32-3. Walkers under the water. 33. James Howel's death. Sprat. 43. A pretty story of the Electress of Bavaria saving a stag. 46. Spanish soldiers the pest of the country, for want of pay. 49. 48. Villany of the nuns at Aix la Chapelle. 49. Funeral of Henrietta Maria. 52. Mermaids. 79. An honourable anecdote of Carlos II. when a boy,—which ought not to be overlooked in the history of that poor unhappy prince. 116. The Princess Anne recalled from France. Louis at her departure presented her with a pair of diamond bracelets valued at 10,000 crowns. 157. A nun in the Russian troubles taken prisoner—who was in man's clothes, and had the command of 7000 men. She was burnt alive. This is a very wild and striking story. 502. An infernal speech of Luxembourg to his soldiers."

This is the entire of half a double page, and again we inquire, what information can be gained from quires of such references?

Even where the memoranda are occasionally longer, it is needful to travel over long nothings before we reach anything separately intelligible; and we can discover little benefit in this *Common-place Book*, except it might be to persons who want to read the same works to which Mr. Southey's hints relate. To do as much as we can, in respect to the matter which it is possible to pick out, we subjoin a miscellany of various character:—

"*Reading the Monthly Review.*—P. 30. A Dutch organist, when blind, learned to play cards as well as the organ, by touch. He became a formidable player, for in handling them he knew what he dealt his antagonist, as well as what he had himself. 'Tickling is in respect to feelings, what an hermaphrodite is in respect to sexes. It partakes almost equally of pleasure and pain.' * * *

"227. 'A promising title is commonly the least promising sign of a good author; and it is observable that the best books, either ancient or modern, have the fewest words in their title pages. The immortal poems of Homer, Virgil, (!) Milton, and that entire library in miniature, the Spectator, are instances of this.' * * *

"263. A deposit of birds' bones found buried in the Priory at Christ Church, Hants."

"*Gentleman's Magazine.*—Part I. P. 127. Tracts showing that a bitch has the power of disgorging food to feed her young. Is it not likely that all beasts of prey have the same? 177. A bridge is immediately to be thrown across the canal in St. James's Park, with a military way from the south side to the palace, so as to afford direct passage to the troops in case of emergency!!"

"*Garmannus de Miraculus Mortuorum.*—116. A professor of anatomy wore boots of human skin! Belts of it! Human bones taken internally, a cure for all ulcers; the bones should be those of the parts affected. The bones of the dead carried about the person act as a fugative for *piolhos!* 113. A finger is preferred, and is good against fleas as well. 119. Aqua Divina, made by cutting to pieces the body, bones, intestines, and all, of a healthy man who has perished by a violent death, and distilling it! 121. Brewers who put dead men's bones in their beer, as a charm to make men drink more of it. The nail of a coffin in which a body has decayed, if fixed in a tree, will make it rot, or at least make it barren. 122. The right-hand of an unborn infant for the 'hand of glory.' Thieves' thumbs bring good luck, especially in brewing; and were bought of executioners at a great price! so that false ones were manufactured from pigs' feet. * * *

"34. Apes, human creatures who were left unfinished because they were made so late on Saturday that the Sabbath put a stop to the work. * *

"94. Biolychnium, a spirit distilled from wine mixed with human blood. When this is lighted, it burns as long as the person from whom the blood was taken lives. Mode of communicating by sympathy, upon concerted signals. Two persons wound themselves, and the blood of each is allowed to coagulate upon the other's wound; after which each feels whatever the other feels in that part. * *

"125. A Jewish figment, 'that as soon as the corpse is committed to the earth a mouse begins at its nose to devour it, causing such pain that it makes the dead cry out. Whoever hears that cry dies within thirty days.' * * *

"343. Jews think that the first thing a soul new-born by death does, is to wash itself, for which reason all the water in the house is thrown away, as having thus been rendered unclean. The angel of death also washes his sword. * * *

"383. A man ruminated, because he had been suckled by a cow for two years. Unlucky to have the body of a suicide carried through your fields. Some would not eat the fruit of a tree on which a suicide had hung himself, lest the fruit should generate a like madness. * * *

"694. Metals in the composition of men, according to their uses; gold in those who are fit to govern their fellow-creatures, silver in magistrates, brass and iron in the lower ranks,—and lead, it may be added, in all. * * *

"940. Some of the best London practitioners in Boyle's time used as a special secret to administer *halinitrum* from churchyard soil, in their medicines. * * *

"983. William Beukeld the first man who salted herrings. Charles V. visited his tomb at Bierolit? * * * * *

"1116. Arachnetes, the spider stone. He could not obtain one, though he shut up great spiders for seven years. But he has a story of one. 1117. 1131. An ox with a brain as hard as marble, the creature was otherwise healthy, but had always seemed stupid, and could not hold its head up, or steady."

This must be a curious book; but we take up,—

"*Miscellanies—Cemeteries.*—'The right of sepulture always was, and regularly is, a character of a parish church, as it is distinguished from a *Capella*.' —*Staveley's Hist. of Churches*, p. 74. 'Generally the ancient custom was to put laminam plumbeam,

a plate of lead, with the name of the dead upon it, into the sepulchre with the corpse, of which there have been many discoveries.'—Ibid. p. 254.

"— 'that epitaph for king Ethelbert, the first converted king of the Saxons, was made no doubt long after his death by some rhyming monk—

"'Rex Ethelbertus hic clauditur in Poliandro
Fana pians certe Christo meat absque Meandro.'

"'Famous King Ethelbert lies here
Closed in this Poliander,
For hallowing churches he goes clear
To Christ without Meander.'

Ibid. p. 225.

These lines were probably written earlier than Staveley supposes—for Staveley thinks the word Poliander did not remain late in use.—Sed Vide.

* * * * *

"Burial not allowed in cities till the time of Gregory VIII. 'for then it was the priests and monks began to pray and perform offices for souls departed, and for their more ease and better accommodation therein, it was first indulged to have sepultures near the churches; Gregory himself with several other Popes, being buried in the outmost porch, before the Church of St. Peter, as Onuphius annotates to Platina. And so it was that Cuthbert XI. Archbishop of Canterbury, happening to be at Rome, and observing the way of burial there, obtained from the Pope a dispensation for making of cœmeteries or church yards, within towns and cities throughout England; and particularly for himself that he might be buried in his own church within the city of Canterbury, whereas before, all the preceding Archbishops being ten, and eight kings of Kent from Ethelbert, were carried out of the city to be buried at St. Austin's, without the walls, and this in pursuance of the provision made for that purpose in the third Ethelbertin charter.'—*Staveley*, p. 261."

We are happily becoming as wise as our forefathers in this respect, and as the Turks, for—

"'The Turkish law forbids that a body should be buried in the same place with another, till after a certain number of years. This accounts for the enormous extent of their burying grounds.'—*Turner's Levant*, vol. 3, p. 354."

And "the burners at Rome used to place one female body with eight or ten male, from a notion that they burnt better. *St. Pierre, Harmonies*, vol. 2, p. 385, quotes Plutarch for this,—'comme si les feux d'amour subsistoient encore en nous après la mort!'"

"*Croker's Boswell.*—Vol. 1. P. 8. N. I know not why Croker should think it so little credible that a woman should die for love. 381. Johnson is wrong. 20. Johnson exceedingly disposed to the general indulgence of children. 24. Johnson fond of romances of chivalry. He read Felixmarte of Hircania, then at Dr. Percy's. 'Yet,' says Percy, 'I have heard him attribute to these extravagant fictions that unsettled turn of mind which prevented his ever fixing in any profession.' * * *

"Public amusements keep men from vice. How little any *decent* form of government affects an individual. * * *

"285. The House of Commons originally not a privilege of the people, but a check for the Crown on the House of Lords."

"*De Blainville's Travels*, 1757.—Vol. 2. P. 36. Among the relics at Venice, one of the *hems* of St. Joseph, uttered by him when he was cleaving wood."

"*Young's Sussex.*—401. Male tench are good for nothing, and are thrown away; *hen* tench only are preserved. Evil of the London monopoly of fish. Every market-town in the country should be obliged to keep open a fish-market."

"*Stevenson's Dorset.*—30. Dorsetshire for soil and climate called the garden of England. The Romans had more stations and summer camps here than in most other parts of England. 41. Encombe called the Golden Bowl; Swalland the Silver one, both in Purbeck. 55. A woman of the Isle of Portland obtained a reward for the discovery that starch may be profitably extracted from the common herb *arum*, or cuckow-pint, called *Starch-moors* in Portland, and lords and ladies in Bedfordshire. It is very white, and might be afforded at 10d. a pound. 72. Tench in the river Stour."

From these it will be seen, that though we cannot praise the plums in this compound, there are many nice little currants to be picked out.

PROGRESS OF ARCHÆOLOGY.

Sussex Archæological Collections, illustrating the History and Antiquities of the County. Published by the Sussex Archæological Society. Vols. I. to III. 8vo. London: Smith.

We cannot better follow up our report of the Sussex Archæological meeting at Herstmonceaux, in *Literary Gazette*, No. 1750, than by calling public attention to the three annual volumes already published of the Transactions of this very meritorious society. Established in the summer of 1846, at the suggestion of a few zealous antiquaries of the town and neighbourhood of Lewes, the Sussex Archæological Society met with immediate and extensive patronage in the county, and has taken the very first place among the local associations which seem destined by their activity and usefulness to supersede the greater bodies which indirectly led to their formation. They become eventually more useful, because their labours are more concentrated, and the limitation of the field of their labours makes them less scattered and desultory in their character.

This has been peculiarly the case with the Sussex society, which, by the zeal of a number of very active antiquaries of the county, among whom stand foremost the well-known names of M. A. Lower and W. H. Blaauw, has already collected together a most interesting mass of materials relating to Sussex history, culled often from documents in private collections which otherwise might perhaps never have seen the light. Many of the papers in this collection relate as much to the general history of Great Britain as to the localities to which they more specially refer. They illustrate all periods, from the dark ages of our primeval annals to very recent times. Of the former class, we may point out the papers on British gold coins found in this county, on a British sepulchral urn found at Storrington, and on some other remains of the same period, by Mr. Frederick Dixon; and papers on similar subjects, by the Rev. Vernon Harcourt, the Rev. E. Turner, and Mr. Charles Ade. The remains of the Romans in Sussex are illustrated in papers by Messrs. Dixon, Lower, and Figg. An account of an interesting discovery of Anglo-Saxon coins at Milton Street, near Alfriston, is given by Mr. Ade; and the Anglo-Saxon period is worthily closed with "Observations on the Landing of William the Conqueror," by Mr. Lower. It will be seen, that in enumerating the papers contributed to this work by the antiquaries of Sussex, we consider *en masse* the whole of the three volumes in each separate period.

The papers relating to the period subsequent to the Norman conquest are more numerous and varied. In the first volume, Mr. Lower contributed a very elaborate and valuable paper on the Seals of the Sussex Cinque Ports, illustrating not only the history of those towns, but that of our mediæval navigation. The same gentleman communicated an illustrative list of the Sussex gentry in 1588, who contributed to the defence of the country against the threatened Spanish invasion which ended in the defeat of the Armada. Mr. Blaauw contributed papers on the translation of St. Lewnicea from Seaford in 1058; on the Nonæ of 1340, and on the will of Richard de la Wych, bishop of Chichester in 1253. Other paintings in this volume relate to mediæval sepulchral monuments found at Lewes and Horsted Keynes; and on mural paintings in Portslade church. We must not overlook a short paper on Chichester Cross, by the veteran antiquary, John Britton, or the longer one on Chichester Cathedral, by the Rev. P. Freeman. But one of the principal gems of the first volume is the "Extracts from the Journal and Account-book of the Rev. Giles Moore, rector of Horsted Keynes from 1655 to 1679." The original MS. is in the possession of the present incumbent of the parish. It extends over the whole of the period alluded to, and is a very curious picture of private life and manners at that time.

To us, one of the most interesting papers in the second volume is Mr. Lower's notice of the iron-works of the county of Sussex, which is profusely illustrated with plates and woodcuts of articles of Sussex manufacture in the sixteenth and seventeenth centuries. This manufacture appears to have existed in this county from the time of the Romans, and continued in some force until very recently. The Rev. Mr. Turner communicated to this volume another private diary—that of Richard Stapley, Gent., extending from 1678 to 1710. The churchwardens' accounts of the parish of Cowfold, in the reign of Edward IV., also form a curious paper. This volume contains interesting illustrations of the histories of the towns of Lewes, Brighton, and Hastings, with papers on several churches and other old buildings and monuments, as well as a number of curious documents connected with Sussex history, among which are some letters of Edward Prince of Wales, written in Sussex in 1305. The most indefatigable writers are still Mr. Blaauw and Mr. Lower. We must notice, in this volume, a short paper of a class of which we should like to see more—"On the Customs and Songs of the South-Down Shepherds." It opens to us a picture of rural life with which now-a-days we are little acquainted, and which is rapidly passing away. The sheep-shearing festivities and ceremonies, and the songs peculiar to them, are here preserved, and will remain as a memorial when the customs they describe are otherwise forgotten. The following scrap is probably derived from a remote antiquity, as it seems from time immemorial to have been sung as a matter of course without being understood.

"Among the toasts drank at rural meetings in Sussex, there was one which was always followed by a very curious song, called the 'Maiden's Health.' I have not been able to ascertain whether it was sung at the sheepshearings; but as it certainly was at harvest-homes, and was very popular, at all events it ought to be preserved.

"'Our maid she would a hunting go,
She'd never a horse to ride;
She mounted on her master's boar,
And spurr'd him on the side.
Chink! chink! chink! the bridle went,
As she rode o'er the downs.
So here's unto our maiden's health,
Drink round, my boys! drink round.'"

The third volume of the Sussex Archæolo-

gical Collections, which has just made its appearance, also contains a long private diary, and a very curious one, that of Timothy Burrell, Esq., of Ockenden House, extending from 1683 to 1714. Like the former, it relates entirely to domestic life, and is amusingly illustrated by the writer's rude pen-and-ink sketches of various articles mentioned, which are here given in fac-simile. The general character of the other papers resemble those in the previous volumes, having for their theme old churches and old houses, monuments, family and local history, customs, &c. The ancient rectory house at West Dean, here described by the Rev. G. M. Cooper, is a rare example of a stone house of the fourteenth century, and is well deserving the attention of the archæologist. Mr. Blaauw has given in this volume abstracts and translations of the correspondence of Ralph de Neville, Bishop of Chichester in 1222, preserved in the Tower of London, and of great local and general interest; and he has also contributed a paper on the history of the priory of St. Pancras at Lewes. To Mr. Lower we are indebted for an account of the castle of Bellencombre in Normandy, the original seat of the De Warenne family; for some curious notes of wills from the Consistory courts of Lewes and Chichester, illustrative of domestic manners in Sussex in the sixteenth century; for a paper on the badges of the families of Pelham and De la Warr; and for supplementary notices on the iron-works of the county of Sussex. The Rev. Mr. Tierney has communicated a detailed account of some recent discoveries in the college chapel at Arundel. And among other papers may be pointed out an account of the silver clock of King Charles I., now in the possession of W. Townley Mitford, Esq.

Our rapid glance over the contents of these three volumes will show that they are not deficient in variety, and we must say that it has seldom been our lot to find in such collections the papers bearing so equally a high character. The Society which has produced it is certainly worthy of our best wishes, for it is a model for such local associations to follow. We need say no more than that, with a low subscription of ten shillings each, it has been enabled to pay all its expenses, to produce a yearly octavo volume profusely illustrated, and to fund some of its money, and that it is now engaged in establishing a central Sussex museum in the town of Lewes.

ARISTOTLE.

A Selection from the Nicomachean Ethics of Aristotle. With Notes and an Introduction. By W. Fitzgerald. 8vo. Dublin: Hodges and Smith.

The Professor of Moral Philosophy in Dublin University has done honour to his position by the able introduction which he has prefixed to this volume. The prodigious intellect of Aristotle was a fitting theme for an eminent ethical instructor, and Professor Fitzgerald has done justice to his theme. For centuries Aristotle was the be all and the end all of standard education; and when the growth of physical knowledge depressed him from his omnipotent station, it was not an unnatural consequence that he should be estimated in morals also far below his still wonderfully elevated level. This is the view which the learned editor has taken, and most satisfactorily does he rescue the great Greek philosopher from the comparative neglect of more modern schools and times. And first he questions the set of fanatical declaimers who would proscribe the study of so glorious a teacher as Aristotle as "*unchristian*":—

"To what purpose (he writes) they ask, 'should Christian men, and especially a Christian clergy, be educated, at a vast expense of time and trouble, in the study of heathen moralists, heathen historians, heathen poets, exposed to the perpetual influence of a base and debasing literature; when, if morals, history, and poetry are requisite, we have the best morals, the most instructive history, and the sublimest poetry, without any admixture of evil, in the Bible?' The eagerness which generally prevails in this country for a classical education, shows that such sentiments are confined to a comparatively small number; and the answer to this wild rant is easy and direct. If there were nothing else, the Bible itself has made such studies necessary. God, whether we like it or not, has been pleased to make His great revelation to mankind in the Greek language; and competent skill in the criticism of that language can only be acquired by the study of the authors in whom alone it now exists. The ancient Greek literature may be base and debasing. Too much of it is; and too much of that most dangerous portion of it is sometimes needlessly put in the way of youth. But the fact, nevertheless, is undeniable, that in that literature is contained the language which all who would understand the New Testament thoroughly, must strive to master."

But, to turn to the master himself, it is sagely observed:—

"Had Aristotle's genius been less various, less universal than it was, so as to leave large gaps in the circumference of philosophy to be completed by others, and unoccupied with works already constructed by himself,—or had fortune brought some of his great contemporaries or successors into notice at the same time,—it is probable that the mischief would have been less. His sway would have been less extensive and more limited; but it would have been juster and more lasting. As it was, he reigned over the whole domain of human thought, and he reigned without a rival.

"Nothing short of repeated and violent assaults could break down an authority so deeply rooted as this in the minds of men. A strong force was to be applied wholly in the opposite direction to that which had so long been acting; and men were to be as much familiarized to hearing of the faults and errors of the Stagirite, as they had before been accustomed to hear of his merits. The attack was, of course, hottest upon his physics, the weakest part of that great fortress which had so long held the human mind imprisoned within its bulwarks; and there were many circumstances at the time which favoured the attack in that quarter. The discoveries of the astronomers and chemists, and the mechanical genius of modern Europe, had introduced a face of things unknown to the ancients; and as, in the first opening of the European mind to renewed study, after the tumult of its barbaric wars, the philosophy of the ancients had disclosed to it fields of speculation which had till then been a *terra incognita;* so, in the sixteenth century, and even before, the practical spirit of the modern world had wrought for itself an entrance into regions which the ancients had perhaps descried from a distance, but had never adequately explored. The novelty of the subject gave it additional attractions; and the attention of men, being for a long time concentred upon that part of philosophy in which every day was showing that the claims of Aristotle to infallibility could no longer be reasonably maintained, it was not strange that his character shrank even far within its true dimensions, when only measured upon that side where it was least fitted to abide the trial.

"The credit of Aristotle, too, labours under this prejudice, that it has not only, through the indiscretion of his admirers, been made to cover his own errors, but has been extended also to the errors of his interpreters. The writings of Aristotle shared in this respect the fate of a greater than Aristotle,—I mean the Holy Scriptures. The commentary took the place of the text. The annotators and paraphrasts spread themselves over the body of his works; and these unsightly funguses appeared parts of the noble tree to which they clung, although receiving none of the vital sap which circulated from its root. It was the schoolmen who ruled the world under the name of Aristotle when what was called his philosophy was first attacked; and, as that name had long served to consecrate their absurdities, so their absurdities, when detected, served afterwards to disgrace his name. It is surprising (if, indeed, any degree of obstinate confusion of thought should surprise us) how, even after all that has been done to remedy such mistakes, the name of Aristotle seems still indissolubly connected with errors which he not only never sanctioned, but even, either expressly or implicitly, condemned. Talk, for instance, in some circles, of Aristotle's logic, and you will be told that it has been exploded and superseded by the rival logic of Bacon,—'the new logic,' as it is called; as if Bacon's Organon, which is a method for the discovery of new truths, could possibly supersede that which is the method of developing old ones; as if Aristotle had not laid down, as distinctly as Bacon, that the fabric of human knowledge is built upon observation, and that generals are to be collected by induction from particulars. * * *

"This (continues our author) brings me to the point in which I am specially interested. Let it be observed, then, that, in the departments of logic, rhetoric, criticism, ethics, and politics, Aristotle did not labour under the same difficulties as in physics. The phenomena were here sufficiently *within his reach*. Let a reader, full of the traditionary notion of the Stagirite, which the declamation of three centuries has impressed upon men's minds, take up the Nicomachean Ethics, and his first feelings will be those of unmitigated surprise at finding the real Aristotle so different from the imaginary. He will come to the book expecting to find an obscure and transcendental doctor, who certifies all his assertions as infallible, deduces his conclusions from the most abstract principles, and involves himself in a thick cloud of those unmeaning terms which form the staple of merriment for every wicked wit who chooses to break a jest upon the schoolmen. He will find, on the contrary, a calm and modest philosopher, who pretends to no higher certainty than the subject will admit of, who often stops short upon a path which he perceives to be leading him too far into abstract speculation, and whose design is the framing of a *practical* argument, the construction of a proof that the thing *is*, not the exhibition of the reasons *why* it must be.

"Aristotle's method in his ethics is, indeed, strictly *inductive*, and proceeds upon direct observation. If some things, at first, strike us as inconsistent with this remark, I believe that second thoughts will, in most instances, convince us that those superficial impressions were erroneous."

The well-defined moral system of the Stagirite would occupy too much of our space, and we must therefore merely refer to Mr. Fitzgerald's clear and excellent exposition, and content ourselves with one quotation more, as an example of the sterling abilities which he has brought to his useful task:—

"The natural appetites and passions of man are essential to the development of his character. Moral virtue can no more subsist without these than a state without subjects. But they minister

to it only up to a certain point, and cannot distinguish for themselves the legitimate point at which they ought to stop. To fix that point is the function of the presiding moral and intellectual faculty, which, by exerting its controlling power, gains from habit the *actual* supremacy which nature gives it *of right*.

"But the law of habit itself acts indifferently. *Whatever* faculty is exerted gains power; whatever is neglected loses it. Now the circumstances of human nature are such as might seem, at first view, to render the desired development impossible. While the primitive appetites, which tend blindly to their objects, are, from the beginning, strong within us, the reason and conscience, which should control them, are proportionably dark and weak. Reason, the charioteer of the soul, comes into the world blind, and holding the reins of appetite in a feeble and unsteady hand. The lower appetites, therefore, cannot from the first be effectually checked by such a master; and, if not checked from the first, and accustomed to the curb, they will gain a force, a proclivity to indulgence, which reason, when the scales fall from his eyes, will find himself impotent to check. Is there, then, no remedy for such a defect? Aristotle would reply that there is. Man is born a helpless being, but a dependent one. The reason of the parent, of the governor, must supply the defects of the child. The child and the youth must be formed by education; they must be trained from the first, by a judicious distribution of rewards and punishments, to practise what is right, and avoid what is wrong, before they can attain that maturity of virtue, in which the self-controlling power acts by its own proper energies. The steeds of this mysterious chariot must be broken in by the help of others, before they can be safely trusted to the management of the young Phaeton."

With this pregnant lesson, so important to just views of youthful training and education, we most cordially recommend this volume to every reader desirous of cultivating the intellectual powers and moral virtues together.

SANITARY REFORM.

How to make Home Unhealthy. Reprinted from the "Examiner." Chapman and Hall.

This clever and pleasant *jeu d'esprit* well deserved conservation in a book form, for it is as full of wisdom as of banter. For the treatment of children, diet, clothing, exercise, &c. &c., are amusingly exhibited, and errors exposed, and ridicule applied as the test of truth to teach what is right and proper. The illustrations too are copious, and display much miscellaneous reading as well as humour in bringing it to bear upon the matters in hand. So much are we gratified with the little volume, that, though it has already enlivened the pages of our able contemporary, we are induced (contrary to our usual practice) to copy one specimen of the latter quality into the *Literary Gazette*:—

"The ordinary manufacture of choice wine for people who are not princes requires the following ingredients:—For the original fluid, cider, or common cape, raisin, grape, parsnip, or elder wine; a wine made of rhubarb (for champagne); to these may be added water. A fit stock having been chosen, strength, colour, and flavour may be grafted on it. Use is made of these materials:—For colour, —burnt sugar, logwood, cochineal, red sanders wood, or elder-berries. Plain spirit or brandy for strength. For nutty flavour, bitter almonds. For fruitiness, Dantzic spruce. For fulness or smoothness, honey. For port-wine flavour, tincture of the seeds of raisins. For bouquet, orris root or ambergris. For roughness or dryness, alum, oak sawdust, rhatany or kino. It is not necessary that an imitation should contain one drop of the wine whose name it bears; but a skilful combination of the true and false is desirable, if price permit. Every pint of the pure wine thus added to a mixture is, of course, so much abstracted from the stock of unadulterated juice.

"You will perceive, therefore, that a free use of wine, not highly priced, is likely to assist us very much in our endeavours to establish an unhealthy home. Fill your cellar with bargains; be a genuine John Bull; invite your friends, and pass the bottle.

"There is hope for us also in the recollection, that if chance force upon us a small stock of wine that has not been, in England, under the doctor's hands, we know not what may have been done to it abroad. The botanist, Robert Fortune, was in China when the Americans deluged the Chinese market with their orders for Young Hyson tea. The Chinese very promptly met the whole demand; and Fortune in his 'Wanderings' has told us how. He found his way to a Young Hyson manufactory, where coarse old Congou leaves were being chopped and carefully manipulated by those ingenious merchants the Chinese. But it is in human nature for other folks than the Chinese to be ingenious in such matters. We may therefore make up our minds that, since the demand for wine from certain celebrated vineyards largely exceeds all possibility of genuine supply, since also every man who asks is satisfied, it is inevitable that the great majority of wine-drinkers are satisfied with a factitious article. The chances are against our very often meeting with a glass of port that has not taken physic. So, let us never drink dear wine, nor ask a chemist what is in our bottles. Enough that they contain for us delightful poison.

"That name for wine, 'delightful poison,' is not new. It is as old as the foundation of Persepolis. Jemsheed was fond of grapes, Ferdusi tells, and once, when grapes went out of season, stored up for himself some jars of grape-juice. After a while he went to seek for a refreshing draught; then fermentation was in progress; and he found his juice abominably nasty. A severe stomach-ache induced him to believe that the liquor had acquired, in some way, dangerous qualities, and therefore, to avoid accidents, he labelled each jar, 'Poison.' More time elapsed, and then one of his wives, in trouble of soul, weary of life, resolved to put an end to her existence. Poison was handy: but a draught transformed her trouble into joy; more of it stupified, but did not kill her. That woman kept a secret: she alone exhausted all the jars. Jemsheed then found them to be empty. Explanations followed. The experiment was tried once more, and wine, being so discovered, was thereafter entitled the delightful Poison. What Jemsheed would have said to a bottle of port out of our friend Hoggins's cellar—but I tread on sacred ground."

ITALY.

Cochrane's Young Italy.

(Second Notice—Conclusion.)

At Naples our Author visited the prisons, and had a confidential conversation with the king on their deplorable condition:—

"Having the good fortune (he states) to meet M. Fortunatos, the prime minister, I did not scruple, without citing any authority, to repeat the reports I had heard, and to inveigh against a system which was dangerous to none more than to the sovereign himself.

"'I am not surprised at what you tell me,' said M. Fortunatos. 'I know the calumnies which are spread abroad in Naples. I know the falsehoods to which the characters of the sovereign and his servants are sacrificed.'

"'But do you deny the number of prisoners?' I asked.

"'Undoubtedly I do,' said M. Fortunatos; 'it is the most ludicrous exaggeration I ever heard—such an exaggeration as I should have thought no rational person could have given belief to.'

"'But how many prisoners do you say there are?'

"'From four to five hundred.'

"'Can you give me a written authority for this?'

"'I can; and further, you shall, if you like, see the prisons yourself.'

"'That is exactly what I wish; when shall I see them?'

"'To-morrow,' was the answer.

"'No,' I said; 'I will see them to-day—at this moment—or not at all.'

"'Well, you shall; I will send for the director of the police—he will accompany you.'

"The order was soon given and obeyed. The first prison I visited was Santa Maria Apparente, situated at the top of the hill behind the Chiaja. It was at one time a convent, and has only recently been converted into a prison. Here I found ninety-seven political prisoners, and from two hundred to three hundred general criminals. This prison was not so bad as might have been expected. The classification of prisoners was in some measure preserved; and although the mass of prisoners, in order to reach their exercising-yard, had to pass through the passage where the political offenders were accustomed to walk, they were quickly driven through it, and rarely allowed to mingle with them. There was a number of not very uncomfortable rooms off a long corridor, and five or six prisoners were quartered in each.

"'How long have you been confined here?' I asked of a prisoner, whom, for obvious reasons, I refrain from naming.

"'Eight months,' was the reply.

"'Have you been tried?'

"'No.'

"'Have you passed through any examination?'

"'No.'

"'Do you know why you are committed?'

"'Because I was accused of conspiring against the government.'

"'Do you expect to be tried soon?'

"'I hope so.'

"The same questions I put to different other prisoners, who, in general, returned similar answers, the periods of detention varying from two weeks to eight or nine months. After the prison had been examined, and the register of the prisoners, the number of political prisoners was found to be, as stated, ninety-seven.

"But the most important prison of all is the Vicaria, so called from having been formerly the residence of the Spanish viceroys. It is situated in the worst part of Naples, near the filthy, debauched quarter called the Porta Capuana. When we arrived there a sleety rain was falling, and the outside, with its massive walls, treble bars, and dirty aspect, conveyed most painful sensations of misery and wretchedness. From the upper stories, where the prisoners were confined for minor offences, they were leaning, with distorted features, against the bars, indulging in foul and brutal observations. On entering, we were met by the authorities, who at once proceeded to open those tiers of dungeons where, up to this time, no Englishman had ever penetrated. The large court into which we drove was surrounded by a portico, which must, at one time, have been handsome; but it all seemed to have caught the contagion of vice and infamy; it smelt of crime. The staircase was wide, but reeking with dirt—a fitting approach to the apartments we were about to enter. At the top of the stairs a mob of tattered, decrepit, loathsome figures were collected; they were the relations of some of the prisoners, who were permitted to see them from time to time, and were admitted, one by one, through a small wicket, a man sitting at the desk, and calling out their names; the man, wicket, desk and all being in momentary danger of being carried away, from the struggles of the mob. It was with difficulty that the officers cleared a

way for us; but at last the huge bars were withdrawn, and we entered the outer room, which was separated from the long gallery in which the prisoners were confined by iron gates, to which they all pressed with eager curiosity; some of them with a vicious expression of countenance, which made me rather wish to remain on the outside of the bars. The officers, by driving the men back, were at last able to open the gates. We entered, and they were carefully locked and barred behind us. It was a gallery perhaps some two hundred feet long by twenty wide, with small rooms branching off it, and in this gallery from two hundred to three hundred were lodged. It would be difficult to convey an idea of the horrors of the place. A damp, fetid, noxious vapour filled every cell; many of the windows by which the light entered had no glass in, and the wet mist penetrated through the close bars. The mass of the prisoners were dressed in the most filthy rags, and their features were fearfully degraded. But, mingling with these, were men of far different character and appearance. Hustled by the crowd of vagrants and scoundrels, might be seen men who, at one time, swayed the destinies of the kingdom, and were honoured by the royal confidence. These men withdrew into their rooms, where some ten or twelve slept together, and there they told me the tales of their misery. Most of them, as at the Santa Maria, had been eight months in prison, without the least appearance of trial; and some did not know of what they were accused. It was distressing beyond expression, to see gentlemen of education compelled to mix with the refuse, the foul refuse of the galleys. As we moved from cell to cell, the crowd moved on, and pressed around us. They could not at all comprehend the cause of this sudden and unexpected visit. After we had walked down the whole length of the gallery, the officers inquired whether we wished to see the lower part of the prisons, in which the worst description of offenders were confined. I thought it was almost impossible that anything could well be worse than what I had seen; but, anxious to have a clear knowledge of the actual state of the prisons, I assented. When we approached the gates, the people pressed on so roughly, that it was with great difficulty the officers could compel them to retire; and when they saw that we were going without giving them any hope that their condition would be ameliorated, their looks of regret and disappointment would have touched any heart. We passed again through the crowd waiting outside, and then went down a steep flight of filthy steps, till we came to the lower range of the building, which was below the level of the ground, where we had to pass through two or three gates before we entered the place where some four to five hundred were confined. A much greater number of officers were here in attendance, as some of the prisoners were very dangerous. The moment the last gate was unbarred, we found ourselves in a place which it would require the imagination of a Dante to paint. I could understand, that if this had been visited first, I should have considered the upper floor a comfortable residence. Some were lying on the floor; others crowded together on the miserable truckle beds, howling and blaspheming, and evidently always addressed and treated as brutes. Some had climbed up to the open bars, and were jeering at the people in the street. It was vice in all its degradation and horror; human life in a living tomb, assisting at the spectacle of its own decay, its own rottenness. The atmosphere was thick as a London fog, from the horrible exhalations. The men here were wild to tell me their stories; some caught hold of my clothes, others scribbled their names on pieces of paper, and thrust them into my hand, which they seized and covered with their pestilential kisses. I spoke to one old man, who had been confined there twenty-five years—twenty-five years in such a place!—and he pretended, I know not with what truth, that to that day he had never been tried. I asked the officers if this was the case, but it was so long since his arrival, that they could not give me any definite information. When the wretched beings were told that I could do nothing for them, their expressions of sorrow were loud and bitter. I was not sorry when, after quite forcing a way through the crowd, we reached the gates, and I heard the last bar drawn, which shut the poor creatures out from all hope. Before leaving the Vicaria, I examined the ecrou of the prison, and also received the report of the hospital. The result of the whole examination was, that at that time there were six hundred and fourteen political prisoners in the city of Naples. Before I leave the prisons, it is only just to mention, that I found the officers most anxious to give me every possible information; that so far from wishing to conceal the abuses, they pointed them out to me, and appeared, throughout, to be acting with the most perfect frankness; in order that, in the event of my being honoured with an interview with the King, I might be able to inform him of the exact truth of the case.

"Having been thus accidentally thrown into a favourable position for expressing my opinion of the state of the prisons, I was naturally most desirous to be of some service to these unfortunate men, and to urge upon the government the fact, that its policy was clearly suicidal. What course could I take? If I addressed myself to the minister, Mr. Temple, I knew that highly-honoured, loved, and esteemed as he universally is, still, that all suggestions in favour of a better administration coming from him are regarded with suspicion, as dictated by Downing Street. The very connexion which subsists between himself and the Noble Viscount at the head of Foreign Affairs, renders him an object of mistrust. Should I speak to M. Fortunatus again? Was it likely that all I said would be fairly reported to the King? or, if reported, would it be expressed with the same energy and earnestness by the supporter of a system as by its denouncer. I thought that the wisest course was to avail myself of the opportunity afforded me by an invitation with which I had been honoured, to Caserta, and to tell the King frankly and fairly my opinion of a system which, at his own desire, had been submitted to my examination.

"The next morning I went out to Caserta with General S——. It was one of those cold, harsh, bitter days, which are not uncommon at Naples at any time of the year. The palace at Caserta is an immense pile, consisting of four vast quadrangles, which reverberate at the incessant roll of the carriages passing through them; it is, however, a gloomy building—not distinguished by the least architecture. The King was engaged with that most eminent and justly-celebrated man, General Filangeri, and could not see me until later in the day,—in the meanwhile, I was permitted to stroll through the long, mournful, spacious galleries, which extend almost for miles, in various directions, and which compose the palace; the furniture of some of the apartments is rich, but they possess no appearance of comfort. The King lives at Caserta in a very retired manner; the evenings are entirely occupied with business; he dines with a large circle of officers at eight, and retires very early. The universal impression is favourable to his industry, conduct, and anxiety to do what is right.

"When I had the honour of seeing him, he at once came to the point by remarking, that I had discovered the injustice of the accusations brought against him, for I had not found fifteen thousand prisoners.

"'True, sir,' I answered, 'but I found six hundred and fourteen; and, permit me to say, it is six hundred and fourteen too many.'

"'How is this?' said his majesty; 'we have not had one execution for political offences!'

"I took the liberty of suggesting, that, to many people, years of imprisonment is even a greater evil than death; that, at any rate, the state of the prisons, and the mixture of all classes of prisoners, could never be justified. I took the liberty of observing, that, as his majesty had been the first of sovereigns to arrest the republican movement, so he should be the first to pardon its excesses; that no constitutional party in Europe could support the principle of imprisoning men without any pretence at a trial, and sometimes on the most unfounded accusations; that it was unworthy of a government to lend itself to petitions against the constitution, which the King had sworn to maintain. Nothing could be more noble, more generous, more sensible than the King's language. He explained the fact of the prisoners of state being thrown into the same prisons with the ordinary offenders, by the circumstance that, until 1848, there was not one political prisoner, and that the government never contemplated such a terrible necessity; but, at the same time, his majesty admitted the evil, and promised that it should be immediately remedied. He declared that nothing could be further from the intention of the government than to promote the petitions against the constitution, and promised that official assurance of this fact which has since appeared in the government organs; above all, he held out strong hopes that a partial amnesty might be soon conceded.

"I do but justice to the King's character in mentioning, that when, on leaving, I expressed my acknowledgments to him for his condescension, and apologized for the frankness with which I had spoken, he said, 'I am delighted to have heard the truth—I wish to hear it; no one is more anxious than I am, to do what is right. I have been shamefully traduced and calumniated—most unjustly so; but you have spoken from your heart bravely and honourably, and I thank you for it!'

"The result of this interview was, that in a few days the political prisoners were separated from the general mass. Some few, I believe, were released; and an article appeared, by government authority, severely blaming the petitions which were signing against the constitution. So far, so well; but to my very deep regret, I have heard from Naples that the political prisoners have been only removed to a much worse place, that their communications with their families have been still more restricted; that the few who were released were men quite unimportant, and would have been discharged at any rate; and what does give countenance to several other reports is, that within the last few weeks, I see by the papers that the constitution has been virtually abolished.

"I have endeavoured shortly to explain, as far as lies in my power, the position of the political parties at Naples; and I must repeat, that a town never existed in which so much exaggeration exists on all sides; the truth, as is generally found to be the case, lies between the two extremes,—the government is not so bad as it has been described; the number of prisoners, and the state of fear in which some people pretend to live are quite ludicrous; but, on the other hand, it is impossible to deny that the first rules of justice have been grossly violated, and that the same power which, when exercised by a good man, may not be productive of great evil, becomes a fearful instrument in the hands of the unscrupulous and tyrannical.

"I am glad of having had this opportunity of repeating the language both of the sovereign and the ministers, in order that others may be able to judge between them and the people. It will be a matter of grave accusation against the King, if he should—through evil counsels—be induced to violate all his assurances, and to justify, by a harsh and unconstitutional policy, the heavy charges which have been brought against him; it is almost impossible to imagine that one who could talk with such admirable sense and propriety, can be wanting in the fulfilment of those obligations which he voluntarily undertook to discharge. But without presuming to interfere in the internal economy of another country, we may be permitted to say, that so long as principles of ordinary jus-

tice are violated, there can be no safety for the sovereign; and that the surest way of provoking danger is to dread it too much."

With this long extract we conclude our review, trusting that the great interest of the matter will justify its length.

SUMMARY.

Favourite Song Birds: a Popular Description of the Feathered Song Birds of Britain, with an Account of their Haunts and Habits. Part III. The Blackbird. Edited by H. G. Adams. Orr and Co.

LITERATURE has certainly not neglected British birds. The completion of Meyer's elaborate and expensive work has only recently been announced. An excellent work, in monthly parts, was commenced about the same period, under the auspices of Messrs. Groombridge, in which a coloured plate of every British species is intended to be given, at a marvellously small cost. The unpretending tract before us holds on the even tenor of its way, leaving to its larger competitors the consideration of ornithology as a science, and contenting itself with pursuing it in its connexion with poetry and imagination. It contains a pretty coloured lithograph of the *merle* of the old poets, the blackbird of the present day.

Every-day Wonders, or Facts in Physiology which all should know. Van Voorst.

A CHARMING little book for young people, in which a number of important phenomena are explained in the simplest manner. Thus, the properties, &c. of the air, the circulation of the blood, the nervous system, the bones, muscles, and other physical parts of the human frame, the senses, &c., are familiarly explained, and the whole "popularized" by some interesting stories of the deaf, dumb, and blind.

St. George for England. By a Member of the English Bar. 8vo. Rivingtons.

A SOMEWHAT fanciful working-out of St. George and the Dragon, as a type of the British constitution, of which the author is an ardent admirer. Not altogether, however, though heartily loyal, *laudator temporis acti*, he finds great fault with the institution of the Police force, and points out other anomalies and apprehended dangers which he would remedy and avoid. The volume is only a portion of his general design, and therefore we need say no more on the subject.

Practical Ventilation. By R. Scott Burn, Engineer. Blackwoods.

AMONG all sanitary measures and appliances there is not one of greater consequence than free and judicious ventilation. Light and air are as essential as food and clothing, or heat (a part of ventilation), and even more than recreation, and other cares for the preservation of health; and it is therefore good and advisable to listen to the experience of an authority like Mr. Burn. He traverses the subject theoretically and practically, and applies his remarks to every condition of our social being —public buildings, private residences, manufactories, and even steamers and railway carriages. Amid all the patents, plans, and devices on this Home inquiry, there must be much to be considered and learnt from a volume of this comprehensive caste.

ARTS AND SCIENCES.

THE BRITISH ASSOCIATION.

WITH the exception, perhaps, of a few brief miscellaneous addenda, we now proceed to the conclusion of our full Report of the British Association, the whole of which, by means of our Supplemental sheet, will thus be contained within the Monthly Part of the *Literary Gazette* for August.

MONDAY.

SECTION B.—(*Chemistry.*)

1. Professor Matteucci, new researches on the conductibility of the earth.
2. Dr. Scoffern, on the manufacture of sugar from sugar-cane, grown in the south of Spain.
3. Dr. Gregory, observations on the sulphite of lead.
4. Dr. J. H. Gladstone and G. Gladstone, Esq., some experiments on the growth of plants in abnormal atmospheres.
5. Dr. R. A. Smith, on the air and water of towns.
6. Dr. Lyon Playfair, on the relative values of the dietaries in use by different classes of the population.
7. Dr. Davy, on the incrustations which form in boilers of steam-engines.
8. Professor Chapman, remarks on the isomorphous relations of Silica and Alumina.
9. Professor Voelcker, on the proportion of phosphoric acid present in natural waters.

1. The principal results of Matteucci's experiments, of a year's duration, were stated to be as follows:—The resistance of a layer of earth to the passage of the electrical current varies according to the quantity of water contained in the earth of which it is composed,—according to the specific gravity of that earth,—according to its depth beneath the surface,—according to the nature of the electrodes and extent of their surface. This resistance does not increase with the increased length of the layer of earth; on the contrary, beyond a certain limit of length, which varies according to the different circumstances just indicated, but which in all cases is of little extent, the resistance of a layer of earth *remains constant* whatever be its length. The theory of the conducting power of the earth he refers to the fact established by him, that the length of the intermediate liquid stratum has no sensible influence on the intensity of the current.

2. The chief points of this communication were, that by the South of Spain process, nearly ninety per cent. of juice is extracted from the cane; and that by the employment of the sub-acetate of lead as a defecating power, the sugar produce is nearly doubled. The former practical yield was stated to be due to passing the cane four times between the rollers of the mill, and afterwards subjecting it to hydrostatic pressure. Dr. Scoffern considers a hydrostatic press an indispensable apparatus for every sugar estate. The advantages of the latter new material in the manufacture of sugar, and the *modus operandi*, have already appeared in our columns for this year, in our report of Professor Brande's lecture on the subject at the Royal Institution.

3. Dr. GREGORY'S experiments tended to show that sulphite of lead, the residue of the above chemical portion of the manufacture of sugar, was not injurious to animals. This result was doubted by Dr. Christison, and he thought that it yet remained to be proved that sulphite of lead was without action on the system.

4. The first experiment was made with hydrogen gas. A pansy was placed in an atmosphere of ninety-five per cent. of hydrogen and five per cent. of carbonic acid in a glass vessel, whose capacity was fifty-three cubic inches. It was inverted over water, but very little surface water was exposed to the artificial atmosphere. A little carbonic acid was introduced from time to time to replace that absorbed by the liquid. The experiment was commenced on 29th of March, the plant having at that time one blue flower in full bloom, and one in the bud; it continued healthy, and the bud was opening slowly until April 9th, when a slight mouldiness appeared. From that time until the 22nd of April the mouldiness gradually advanced, and the plant drooped, so that it was thought unnecessary to prolong the experiment. A comparative experiment was made with a pansy placed in a glass vessel filled with atmospheric air, all other circumstances being equal. The plant became mouldy about the same period as the other, but the mould did not advance beyond the lower leaves, and the plant continued healthy for weeks. In order to ascertain what effect different gases might have in accelerating or retarding germination, and what compounds of carbon were capable of affording nourishment to the young plant, four onions just commencing to sprout were taken, weighed, and placed in vessels containing respectively carbonic acid, carbonic oxide, coal gas collected by displacement, and air containing eight per cent. of light carburetted hydrogen, prepared by the decomposition by heat of an alkaline acetate. The four vessels were each capable of containing fifty-three or fifty-four cubic inches of gas, and were inverted over water as in the previous instance—and every care was taken to ensure the integrity of each experiment. The onions selected had each a plumule of about half an inch in length; the experiment was conducted in a light room, and extended through the months of April, May, and June. The onions in the atmospheres containing hydrocarbons grew rapidly and put forth fresh roots. After thirty days the plants were taken out of the coal gas and carburetted hydrogen, as they had grown to the top of the vessels, being at the time in a very healthy condition. The onion in air grew, but not so fast. Those placed in carbonic acid and carbonic oxide stopped growing, and eventually became rotten. The plants in each case lost weight. A pansy in flower, a young stock, and grass plant (Poa annua) were tried in nitrogen gas. The pansy and the stock dried up and died in a day or two, becoming covered with mould—the grass plant in the comparative air arrangement grew and seemed healthy, mouldiness only appearing on partially decayed portions. The readiness with which mouldiness grows is curious. A receiver half full of nitrogen gas happened to be left standing over the pneumatic trough, and a bung was floating on the surface of the water inside. In a few days' time a white growth was observed upon the bung, and not on it only, but also in patches over the surface of the water. The Messrs. Gladstone have now in progress an experiment of hydrogen and oxygen gases, in which the vegetable is supplied, as in nature, with the carbonic acid necessary for its growth through the agency of animal life. The experiment was commenced on the 18th of last month—the flower has continued in a healthy condition, and its leaves of a good colour. As to the flies, whence the carbonic acid was derived, it did not appear that the substitution of hydrogen for nitrogen in the atmosphere had any marked effect upon their breathing, and thus the observations of M. Regnault upon other living creatures were confirmed by an instance from the articulata. But it was curious to observe the effects that resulted from the low specific gravity of the gaseous mixture. The larger flies were unable to walk up the glass, nor could they mount with their wings, and if they launched themselves from any prominence, it was only by a great effort that they were able to fly an inch or two before falling to the bottom. While the comparative experiment in atmospheric air presented a scene of animation and buzzing, the flies in the mixed hydrogen and oxygen walked slowly and in perfect silence.

5. The object of this paper was to show that the power of sand and porous bodies is very great, and may be depended upon for the purification of water from the greatest impurities and on whatever scale it is used, and also for the removal of impurities in solution.

6. Dr. LYON PLAYFAIR has, at an enormous expenditure of time and trouble, classified and analyzed the tables of dietary used all over the country, in unions, schools, &c. The result, as Dr. Playfair showed, is that no good system has yet been adopted, and that we are as yet, in spite

of all the improvements of chemistry, in almost total ignorance of the exact nature and quantity of the food required for the maintenance, in a healthy condition, of any of the classes of our population. He established this by a variety of most valuable tables, the importance of which were acknowledged by various members of the Section, including Professor Christison and Professor Gregory, who took part in the animated discussion which followed.

7. Incrustations by deposition from the water of narrow seas or of the ocean, Dr. Davy has almost invariably found to be crystalline in structure, and to consist chiefly of sulphate of lime, other ingredients amounting in the whole to only about 5 per cent. Those of locomotive engine-boilers are more variable in their constituents. He has examined as yet, however, only two specimens. They were laminated, and consisted principally of carbonate and sulphate of lime, with small quantities of magnesia, protoxide of iron, silica, and carbonaceous matter.

9. As water, charged with carbonic acid, is capable of dissolving bone-earth, this important fertilizing substance is found in many natural waters, percolating rocks which contain phosphoric acid. Such waters, therefore, may be applied with advantage for irrigation. The advantages derived from this too often neglected natural source, are strikingly exhibited in the irrigated meadows in the neighbourhood of Cirencester; and it is the opinion of Professor Voelcker that one of the chief causes of the beneficial effects which follow the application of the water for irrigation in this locality, is to be found in the phosphate of lime it contains, the graptolite of the neighbourhood being a source of phosphoric acid. A very hard water from Edinburgh likewise proved to contain phosphoric acid, but its proportion was not so large as that in the Cirencester water, the quantity of phosphoric acid in a boiler incrustation formed by this Edinburgh water being only 0·427 per cent. Sea water also contains phosphoric acid, but the proportion of the latter amounts to mere traces. A quantitative determination of phosphoric acid in the boiler deposit of a Canadian steamer gave only 0·0306 per cent., and that in a boiler incrustation of a steamer plying between Dublin and Liverpool 0·0424 as the per centage of phosphoric acid. In conclusion, Professor Voelcker recommended Swanberg's test, as a ready means for deducing the presence of phosphoric acid in natural waters.

SECTION C.—(*Geology and Physical Geography.*)

1. Professor Hitchcock, on Terraces in New England.
2. Professor Hitchcock, on Erosion from River Action.
3. Dr. Becker, on the constant increase of Elevation of the Beds of Rivers.
4. His Grace the Duke of Argyll, on a Tertiary Fossiliferous Deposit underlying Basalt in the Island of Mull.
5. Sir R. I. Murchison, to present and explain the first Geological Sketch-Map of Spain, from the communication of M. Ed. de Verneuil.
6. Professor Nicol, notes on the Geology of the Southern part of Cantyre, Argyleshire.
7. Mr. R. Harkness, on the Representatives of the Mountain Limestone as they occur on the south and east of Dumfriesshire.
8. Mr. R. Harkness, on the relative position of the Footsteps in the Bunter Sandstone of Dumfriesshire and Cheshire.
9. Sir William Jardine, on the Footprints in the Sandstone of Corncockle Moor, Dumfriesshire.

The increasing number of papers tends much to embarrass the Sections and the reports of their proceedings. We are accordingly the more inclined to our plan of confining our notices to what was really most interesting and new.

1, 2. A long geological discussion ensued, in which every one rejoiced to hear Professor Sedgwick, after his late serious accident, leaving his right arm still very helpless, take a prominent part. His fine impulsive character was strikingly exemplified on this and after occasions, when, warmed by his subjects, his feeling got the better of his pain and discretion, and the injured limb was brought into action it could but ill sustain. The Professor and other geologists seemed to differ from Professor Hitchcock's conclusions, and

3. Did little more than continue the subject.

4. Exhibited the novelty of a Duke in rank proving himself also to be a Noble in the science to which he had devoted his attention.* His Grace's paper was acknowledged by the unanimous Section to be one of the best of the meeting.

The noble author said that a large number of the Western Isles had been included by Dr. M'Culloch under the name of the "Trap Islands," and of these Skye was considered by him as the centre of the northern, as Mull was of the southern trap group. It would be seen from the map that Mull was entirely composed of trap, except at certain points of the coast where the lias and oolite appeared in cliffs of great elevation, and for the most part inaccessible. It must, however, be understood that the trap could only be considered as a superficial covering, inasmuch as frequently when sections of the strata were presented, the trap was found to overlie both secondary and, as it now appeared, tertiary beds. The fossil leaves are not found scantily distributed through the bed, but there is in fact a perfect mass of leaves, layer on layer. On slitting these layers with a knife or other instrument, not only were the ramifications quite perfect, but in some cases might be seen the remains of the green fleshy matter of the leaf. It was remarked, however, that no bolls or trunks of trees could be discovered, nor even a twig of any size. In the district of the Ross the trap is succeeded first by mica slate and next by granite. The beds to which the paper referred occurred at the Promontory of Aidture, where the coast formed a sea-cliff about 130 feet high. A cross section was presented by a natural ravine; and the following was the order of the beds in the descending order: —1. A bed of basalt, rudely but very obviously columnar. 2. A thin stratum of vegetable matter, almost entirely composed of compressed leaves of dicotyledonous trees. 3. A bed of tuff or volcanic ashes, closely resembling that found in the neighbourhood of Vesuvius; also to that which had been found by Mr. Gautt of Jordanhill in Madeira; and, as the Duke was informed by Sir Charles Lyell, almost identical with that which he had found in Auvergne. This bed passed into a conglomerate of flint—many of them being unequivocally chalk flints. 4. A second bed of vegetable matter, from which the finer specimens were derived. 5. A second bed of tuff or volcanic ash. 6. A third bed of leaves, thinner than the others, and with fewer vegetable impressions. 7. A thick bed of amorphous basalt. 8. And lastly, dipping into the sea, highly and beautifully columnar basalt. As no trunks of trees had yet been found, and as the leaves were mixed with plants of a reedy texture, a species of syriesetum being specially marked, the Duke concluded that the leaves had been lying in a shallow or marsh, in which autumn after autumn they had been accumulating, and that they had been overflown by a current of liquid mud, which had raised or floated individual leaves, leaving the mass of vegetable matter below almost pure—that this had again been succeeded by the volcanic ashes, which, though forming a distinct bed, had part of its substance involved in the upper portion of the leaf bed. The noble author had minutely examined the formation in company with Mr. Smith, of Jordanhill, and he had also sent specimens of them to Sir Charles Lyell, Professor Edward Forbes, and other distinguished geologists, all of whom agreed in thinking that the present investigation would prove eminently conducive to a proper understanding of the geological phenomena of the Hebrides. His Grace's opinion, taking into consideration the absence of anything like branches of trees, and the presence of beds of fossil leaves, was that these leaves had fallen on the surface of a shallow lake or marsh, and gradually sunk to the bottom; and, at some subsequent period, been overrun with liquid mud.—Professor EDWARD FORBES, after some remarks on the great importance of the discovery of tertiary beds in a region where their presence had not hitherto been suspected, said that he had at first concluded that the fossils belonged to the Miocene tertiary, but that from some recent discoveries in Germany, he was inclined to believe that they were of earlier date, and belonged to the Eocene. He had been informed by Mr. Nichol that the only dicotyledonous wood, not coniferous, belonging to the Scotch formations, which he had examined, came from the Isle of Mull, and were probably contemporary with those discovered by the noble Duke.

Mr. SMITH, of Jordanhill, had visited the locality with his noble friend, who, from having mentioned the observations in the plural number, might lead some of the Section to suppose that he (Mr. Smith) had some share in the discovery, but he could assure them that no paper had ever been laid before them which was more entirely the author's own. With the solitary exception of the accidental discovery of a leaf, every fact brought forward, every conclusion drawn, were his. He concurred entirely with them, and would confine himself to the geological evidence which showed that they were tertiary. He then showed that the deposit was older than the pleistoasic or aciel epoch, from the proofs of submergence which he stated, and which also accounted for the absence of a crater or cone, which had been denuded, whilst the subjacent beds had been preserved by the cap of basaltic lava which had covered them. From the presence of chalk flints in the beds of ashes, he concluded they were older than the chalk, and were therefore tertiary. He noticed the presence of obsidian, and concluded by hoping that the noble Duke would prosecute his important researches, and give to the world an account, illustrated with figures, of the fossils.

Professor SEDGWICK said that, along with his friend who occupied the chair (Sir R. I. Murchison), he had visited a considerable part of the region which had been described by the noble Duke. Not having examined the country in detail, they had missed the very interesting vegetable deposits discovered by his Grace. The importance of the discovery lay in its being one of a series, similar tertiary deposits having been discovered in the north of Ireland, and in Iceland. He was inclined to differ from his friend, Professor Forbes, and to assign the deposits to the Miocene rather than to the Eocene period. The most important circumstance connected with the discovery, was that Scotland, and especially the Hebrides, which formerly appeared to have been shut out from the operations of this period, now contributed their quota of information as to its history. After referring to the romantic scenery of the Island of Mull, which had been so beautifully described by the Marquis of Northampton, Professor Sedgwick expressed his hope that the noble Duke would go on and prosper in the path on which he had entered. As the representative of the House of Argyll, and as bearing a name the most illustrious in Scotland, he believed he would throw on it additional lustre by cultivating the arts of peace, and by contributing to the advancement of science, and the promotion of philosophy and human happiness.

5. Sir RODERICK MURCHISON presented the first sketch of a geological map of the sedimentary deposits in Spain, communicated to him by M. de Verneuil, the distinguished French geologist, who has lately made two excursions into the Peninsula, and who, by his own observations, as well as through the information given him by the Spanish geologists, has cleared up the distribution of the principal masses of rocks. The central part of Spain is distinguished by three chains of mountains, which may be termed the skeleton of the country —the Guadarrama, the Montes de Toledo, and the Sierra Morena. Having emerged before the secondary period, these ridges must have formed islands, around which had accumulated jurassic and cretaceous deposits. They all range in about the

* Should the Association have a second invitation to Glasgow, as is most probable, a few years hence, Sir R. Murchison, with his characteristic energy, procured a more than half-pledge from his Grace, that he would accept the presidency, which would be a most desirable event.

same direction—W. and by S.—E. and by N. The highest—the Guadarrama—is principally composed of granite, gneiss, and every class of crystalline schists. Towards the east, these primary rocks disappear under the secondary formations, whilst to the west they seem to proceed to the frontier of Portugal. The primary rocks are not limited to this ridge, but occur in other two distant parts of Spain. Gallicia is principally composed of granite, gneiss, and mica schists occasionally surrounding patches of slates and limestone, in which no fossils have yet been found. There is no doubt that these rocks are of great antiquity, situated as they are at the extremity of the Palæozoic chain of Cantabria, of which they form a sort of expansion. Of the Palæozoic rocks, the Sierra Morena is the only tract in which Silurian fossils have been discovered. Crossing this chain from Almaden to Cordova, and proceeding from north to south, the formations succeed each other in an ascending order. The oldest or lowest traces of life are trilobites, which occur in black shivery slates. The *Colymene Tristani* is, up to the present time, the only known Silurian fossil in Spain. The lowest bed of trilobites, characterised in Sweden and Bohemia as the *Paradoxides*, is wanting both in Spain and Brittany, thus proving the intimate connexion which exists between the Palæozoic rocks of these two countries. The Upper Silurian rocks are poorly represented in the Sierra Morena; but the Devonian rocks are fully developed in it. The existence in Spain of the Permian system is still a problem, as no fossils of that age have ever been found. With regard to the secondary rocks, though equally destitute of fossils, the Trias is better known than the supposed Permian system. From the Pyrenees it may be traced to the provinces of Santander and Asturias, as well as to the kingdom of Leon, on both sides of the Cantabrian chain. It does not contain the three series of rocks from which the name originated, but consists merely of marls and sandstones of red colour, placed between the lias and carboniferous strata. The jurassic and cretaceous formations extend over most of the eastern and southern parts of Spain, covering vast areas in Catalonia, Aragon, Valencia, Murcia, Malaga, and Ronda. Lying upon the trias, they constitute most of the high lands and mountains which to the east of Madrid make the *divortia aquorum* between the Atlantic and the Mediterranean Sea. In fact, they surround the central and more ancient parts, and may be traced to Portugal, where they are principally confined to the littoral region. Along the Guadarrama, however, the chalk penetrates into the very heart of the country, extending to Segovia, and crossing from Madrid to Bayonne. The chalk of Spain appears to consist only of the hipparitic limestone, or beds equivalent to the lower chalk of England and France, and to a lower member, which, largely expanded in the provinces of Santander and Biscay, seem to correspond to the Upper Green Sandstone, but do not go so far down as the true Neoconian. The upper member of the chalk is widely spread over Spain, as well as over Portugal. Above the chalk, and according to appearances having been subjected to the same disturbances, lie the nummulitic rocks, which most geologists now regard as true eocene. The Geology of Spain is not sufficiently advanced to essay a classification of its mountains as regards the periods of their elevation. It may, however, be safely inferred that the Sierra Morena, though a low range, is the most ancient, from the fact that on both its sides the tertiary strata, in contact with the old rocks, are horizontal, whilst in the Guadarrama more recent movements seem to have taken place, the same fresh water limestone being in some places slightly elevated, whilst in the Pyrenees, and the mountains in the south of Spain, the subsoil appears to have been tormented by violent and recent disturbances.

SECTION D.—(*Natural History and Botany.*)

1. Professor A. Voelcker, on the influence of salt on vegetation.
2. Dr. Lankester, on the epidermal appendages of the order Haloragæ.
3. J. T. Mackay, LL.D., on Draccena Draco.
4. Professor Royle, F.R.S., on the species of Gossypium, and the effects of climate in altering the characters of cotton.
5. Mr. George Read, observations on ropy bread. Communicated by Dr. Lankester.

Zoology.

1. Professor Van der Hoeven, on the genus Perodicticus of Bennett, and its relation to Stenops.
2. Dr. H. Lowe, report on the progress of entomology in Scotland during the last few years.
3. Professor Allman, report on the present state of our knowledge of the fresh-water Polyzoa.
4. C. W. Peach, Esq., a list of Zoophytes from the vicinity of Peterhead, with a notice of three new to the British list.
5. Professor E. Forbes, J. Gould, and G. Busk, Esqs., notices of the Zoological researches of the naturalists under the late Captain Owen Stanley, in H. M. ship Rattlesnake.
6. George Busk, Esq., on Zoophytes, from the shores of Africa.

In this section, also, as will be seen from the above list, the programme was numerically very voluminous; and yet the proceedings do not require any long exposition.

4. Professor ROYLE's observations on the effects of climate in altering the characters of cotton, dovetailed most usefully with Mr. Porter's paper in the Statistic Section, (see *Gazette, Supplement* to No. 1751,) and the remarks elicited by it from Mr. Filkin, Colonel Sykes, and other speakers. From these it appeared that this important plant might be advantageously cultivated in Guzerat, Malabar, and along the Indian coasts, where transport was more ready than in the Punjaub, 1500 miles from the sea, in the West Indies, in South America, and in Australia. A valuable economy might also be introduced by combining silk or flax; and also by encouraging the growth and manufacture of flax in Ireland. But one great drawback upon the sufficiency of supplies from India and elsewhere, arose from the irregularity of the demand. When American cotton was dear, our manufacturers sought the article from other sources, *pro tempore*, and the moment the American fell in price it was again resorted to, and India, for example, neglected. Thus the growers had no security from year to year, and the consequence was, that the cultivation ceased.

In the Zoological division, No. 4, Mr. PEACH, who has moved from Cornwall to the north of Scotland, and continues his practical researches there, read, with comments, the list of zoophytes as announced in the title. He commenced by stating that when he went to Peterhead in December last, he took with him a copy of a list of the zoophytes of the coast of Aberdeen, which had been noticed by Mr. John M'Gillivray in 1844. On his arrival he interleaved it for the purpose of verifying Mr. M'Gillivray's list; this he has done with one or two exceptions, and added more than as many more, and this on a line not extending more than four miles on the face of the coast—he has several more which he has not had time to examine, and has also found two which are new to the British coasts. Some of his additions amongst the flexible ones are of the rarest kinds, and the greatest number are of the calcareous sorts, chiefly lepralias. He observed that many are very abundant on this coast which are very rare on the coast of Cornwall, and that others which are abundant in the latter county, are altogether wanting here. He afterwards introduced to the notice of the meeting drawings of the various changes which the microscopic naked-eyed Medusæ pass through before arriving at the adult stage—also of a Sagitta, an animal of microscopic size with a double circulation in the tail; as well as another of these beautiful Medusæ which had swallowed the head of a Sagitta, and the struggles of the latter to free itself had turned its enemy inside out; still it held its prey with the greatest tenacity.

5. Was a *viva voce* communication by Prof. E. FORBES, and rendered very interesting by the feeling manner in which he described the scientific services, and lamented the premature death of the late Capt. Stanley. The Professor spoke of him as most zealously devoted to science, and so successful in his pursuits of ornithology and other branches of natural history, that when what had been collected and sent home under his auspices (portions of which had been received at the Museum of Practical Geology), it would be seen that he had made large and most important additions to our knowledge. Radiata, Mollusca, Medusa, &c., of entire novelty, from Madeira, Rio Janeiro, the Cape, and the Straits of Torres Vedras, had been obtained in such abundance and variety as to mark almost an epoch in the science. The Professor also bestowed great praise on the skill and exertions of the naturalist who accompanied Capt. Stanley, and the surgeon of the *Rattlesnake*, who had wrought together like brothers in the cause.—Mr. Busk's communication, No. 6, completed the subject.

Ethnological Sub-Section.

1. Rev. Dr. Edward Hinckes, observations on the language and mode of writing of the ancient Assyrians.
2. Major-General Briggs, on the aboriginal tribes of India. *With Illustrative Map and Drawings.*

Physiological Sub-Section.

3. Dr. Tilt, on * * * * * *
4. Dr. M'William, R.N., on the use of the Bofareira (Ricinus communis), of the Cape de Verd, as a means of exciting lactation.
5. Dr. Laycock, on the relation of consciousness to reflex or automatic action.
6. Dr. Carpenter, F.R.S., on the relative functions of the cerebral hemispheres, and sensory ganglia, in intellectual operations.
7. Dr. J. Dalziel, on hysteria, hydrophobia, and other convulsive affections, containing an analysis of the phenomena of water-dread.

1. Already reported: see last Number.

Prof. GOODSIR made a few observations on a Human Mummy found in the guano at Ichabo. He stated that the figure was only examined on Saturday, and that he had discovered from the appearance of the feet that the person had wanted shoes. There were indications on the foot of a large corn on one of the toes. The body was certainly that of a European, having red sandy hair, a conclusive proof of its origin. The probability was that it was that of a Spanish sailor, and that he had died on the island about 1721.

2. General BRIGGS's paper, read by Dr. Latham, was long, and so valuable that it has been ordered to be inserted entire in the volume of the Association's Transactions. No synopsis, within ordinary limits, could afford any idea of it. Its main point was, that all the tribes descended from one origin, notwithstanding the great diversity of dialects.

3, by some inadvertency, was permitted to be announced in the printed list of the Physiological Sub-section. The title was hardly fit for a medical class, and neither title nor subject tolerable for popular announcement or discussion. Neither were the other papers in this class of a kind to excite interest beyond the scientific professional circles.

A pseudo portrait of Shakspere was exhibited at the close of the Section, of which we shall speak anon.

SECTION F.—(*Statistics.*)

1. G. R. Porter, Esq., F.R.S., remarks suggested by an examination of the recent statistics of the cotton manufacture in Great Britain.
2. Mr. Keith Johnston, on the geographical distribution of health and disease as indicated by natural phenomena.
3. Professor W. P. Alison, account of the system of croft-husbandry adopted at Gairloch in Ross-shire, chiefly on waste lands, since 1846, and its result as illustrating the conditions under which the labour of paupers and criminals may safely be made productive.

1. This very important paper was inserted in the supplemental sheet containing the proceedings of the British Association, given with our No. of the 3rd inst.

2. Beautifully illustrated by maps and diagrams, the atmospheric effects of climate on the physical and moral man were comprehensively traced in this able paper. Without going into particulars, or referring to the comparative and other tables, the chief points in the communication may be stated thus:—Endemic fever, including remittent

and intermittent fever, prevails in North America, the West India Islands, the west coast of Africa, Syria, South Italy, the Ionian Islands, and in general in the low marshy districts of warm countries. Yellow fever is endemic in North America and the West India Islands, between latitude 5 degrees and 40 degrees north; its northern limit in Europe being the latitude of Gibraltar. Diseases of the digestive organs are most prevalent in India, West and East Africa, the Cape of Good Hope, England, Guiana, &c. Disease of the liver greatly predominates in the East Indies, while consumption is most conspicuous in Great Britain, Newfoundland, Canada and Jamaica. Dropsy is most prevalent in West Africa, Great Britain, and Guiana. Among the different countries the most striking contrasts are sometimes exhibited; thus the west of Africa is to Europeans most fatal, while the south-east is the most healthy country in the globe. The effect of the means adopted for checking disease in the three great countries of England, France, and Germany, during the past century, is such, that while formerly one out of every thirty of the population died each year, now the average is one in forty-five—reducing by one-half the number of deaths in these countries. In the year 1700, one out of every 25 of the population died each year in England. In 1801, the proportion was one in 35; in 1811, one in 38; and in 1848, one in 45; so that the chances of life have in England nearly doubled within 80 years. In the middle of last century, the rate for Paris was one in 25; now it is one in 32.

3. Professor ALISON—on data which he laid down in a clear and systematic manner—contended for the application of the Croft plan of management and spade husbandry on waste lands, for the advantageous employment of criminals and paupers, and the general productiveness of the soil of the country. He thought it peculiarly adapted to remedy the evils under which Ireland was suffering. Professor Hancock differed from the last opinion; and the *vexata quæstio* was not resolved when the section adjourned, with thanks to Professor Alison.

SECTION G.—(*Mechanical Science.*)

1. Mr. Palmer Budd, on some further results of the value of gaseous escape from the blast furnaces at the Ystalyfera iron-works.
2. Mr. Whitworth, on a new duplex turning lathe.
3. Mr. Lassell, a new method of supporting a large speculum, free from sensible flexure in all positions.
4. Mr. George Beattie, on a new door-spring, the motive power being the pressure of the atmosphere.
5. Mr. Thomas Stevenson will state the progress and results of his observations on the force of the waves, with reference to the construction of marine works.
6. Mr. Swan, on the limits to the velocity of revolving light-house apparatus, caused by the time required for the production of luminous impressions on the eye.

1. Farther advantages obtained since our report on the subject at Swansea.

2. Ingenious and useful, like all Mr. Whitworth's improvements. His lathe did double the work of any before it, and did it better.

3. Mr. Lassell described his new method:—When the speculum was in a horizontal position, he supported it at eighteen different points on which the weight might bear equally; and by casting the speculum with ribs, he proposed to adapt levers, that when the telescope was elevated, they might bear the weight among them, and thus prevent it from disturbing the true form of the speculum. Dr. Robinson expressed his approbation of the contrivance.

4. The principle of this contrivance is simply to cause the opening of the door to move an air-tight piston from the closed end of a cylinder to the open end; the atmosphere then acting upon the piston, forces it back, and thus closes the door. It was much commended.

5. Mr. STEVENSON stated the result of certain observations made by him on the force of the waves with reference to the construction of marine works. The result of the experiments hitherto made may be observed to be a force of about 1¼ tons per square foot for the German ocean, and of three tons for the Atlantic ocean. In proof of the correctness of these results, Mr. Stevenson referred to the circumstance that at the Bell Rock the water has been known to rise to the height of 106 feet; and that at Plynish, in Argyleshire, beams of wood were broken measuring 12 inches square, and indicating a force of 1½ tons per square foot.

6. Mr. SWAN then brought forward his communication referring to the well-know fact, that the impressions of light remain for a definite portion of time, about one-tenth of a second, but added that no experiments, so far as he knew, had been made as to the time required for making the impression. His improvement had been undertaken with this view. The brightness of the impression he found to be in proportion to the time of making it. When the time was one-fiftieth of a second, for example, the brightness of the impression was about one-tenth of the brightness of the full light. From this, Mr. S. inferred that the light could not exceed a certain rate of revolution, otherwise a sufficiently vivid impression could not be made upon the eye.

An excellent lecture by Dr. Mantell, on the extinct birds of New Zealand, closed the busy proceedings of Monday. We need hardly say that the subject, so ably handled, from the same source, has already frequently graced our columns.

TUESDAY.

SECTION A.—(*Mathematical and Physical Science.*)

1. Professor Phillips, on isoclinal lines in Yorkshire.
2. The Astronomer Royal, on a question of probabilities which occurs in the use of a fixed collimator for the verification of the constancy of position of an azimuth circle.
3. Professor J. D. Forbes, on the argument for the physical connexion of double stars deduced from the theory of probabilities.
4. Mr. Nasmyth, on the lunar surface.
5. James Dennistoun, Esq., on a tissue spun by caterpillars.
6. The Rev. J. B. Reade, on a new solid eyepiece.
7. Sir W. Rowan Hamilton, on polygons inscribed on a surface of the second order.
8. Professor Thomson, on the theory of magnetic induction.
9. Professor Nichol, on the courses of the winds in the region of Glasgow for the last six years.

Two-and-twenty papers were on the list for Tuesday, of which, however, the above only were communicated, (the remainder stood over for an early sitting next day.) The time of the section was chiefly taken up with Nos. 3 and 4, and with the discussion on the former.

1. Sixteen years ago, Professor PHILLIPS made a magnetical survey of a part of Yorkshire unequally elevated, and had then, as he conceived, worked out natural isoclinal lines for that district. But certain members of the association did not agree to this, and he had given up the inquiry until he obtained a dip-circle. With this instrument he had gone over the ground again, taking observations at thirty-five points within the area with such extreme care that he can trust the results to a very small amount. The influence of high ground on the dip of the needle is thereby confirmed, and the dependence of the flexures and breaks of the isoclinal lines on the relative height and mass of elevated ground established. In low countries these lines nearly correspond with the mean line, but in mountainous districts great flexures are developed; and in Professor Phillips' map of the Yorkshire district the flexures were exceedingly singular, the lines crowding together against the high ground.—Professor Forbes said that Professor Necker had pointed out the connexion of the magnetic curve with the direction of mountains, and this now appears to be confirmed by Professor Phillips.

2. With the altitude and azimuth instrument at Greenwich, constructed with extreme solidity, the N. point had been observed with great accuracy, and it was thought to be constant, but it varied; and the question was, whether the observations were bad, or the instrument unstable. It might be assumed that the observations of the stars were correct, that the collimator was rightly fixed, or that the instrument was stable and correctly constructed. Either might be believed, but if the results from these three assumptions disagreed, then which was best, and by how much? This question Professor Airy worked out, and the result, "a most astonishing one," was that the presumption that the circle was stable was most to be depended upon. He, however, pointed out a part of the reasoning which might be fallible, and if so, then the actual zero from the stars by a mean of observations could alone be trusted. As to whether any point of his investigation was really fallible, he requested inquiry.

3. Professor J. D. FORBES apologised for bringing this subject forward in its present state. It had reference to a short note published in the *Philosophical Magazine* twelve months ago, the main portion of which was as follows:—"Nearly a century ago, Mitchell computed the chances to be 500,000 to one against the stars composing the group of the Pleiades being *fortuitously* concentrated within the small apparent space which they occupy; and he thence infers the probability of a physical connexion between them. Struve has pushed this consideration much further. In his classification of double stars, he has applied the same argument to estimate the improbability of the occurrence of even *single pairs* of stars in close proximity. He 'calculates the odds at 9570 to one against any two stars from the first to the seventh magnitude inclusive, falling (if fortuitously scattered) within four seconds of each other. Now the number of such binary calculations actually observed at the date of this calculation was already 91, and many more have been added to the list. Again, he calculates that the odds against any such stars fortuitously scattered falling within 32" of a third, so as to constitute a triple star, is not less than 173,524 to one. Now, four such combinations occur in the heavens.' Sir John Herschel, from whose *Outlines of Astronomy* I take this statement of Struve's results, adds, 'the conclusion of a physical connexion of some kind or other is therefore unavoidable.' Now I confess my inability to attach any idea to what would be the distribution of stars or of anything else, if 'fortuitously scattered,' much more must I regard, with doubt and hesitation, an attempt to assign a numerical value to the antecedent probability of any given arrangement or grouping whatever. An equable spacing of the stars over the sky would seem to me to be far more inconsistent with a total absence of Law or Principle, than the existence of spaces of comparative condensation, including binary or more numerous groups, as well as of regions of great paucity of stars. Thus, to take a familiar instance:—No bad representation of stars and their distribution may be made by sparkling viscid white paint from a coarse brush upon a dark ground. It is impossible to conceive a nearer approach to a 'random scattering.' But I am assured, by an ingenious friend, who has used this contrivance in aid of pictorial effect, that such an artificial galaxy will present every variety of grouping, with double and treble points innumerable (as I have indeed myself witnessed); nor can I well see how, upon any reasonable theory of chance, it should be otherwise."

Since writing the above, Professor Forbes had carefully examined the subject, and had commenced writing an elaborate paper, but it had been unavoidably hindered, and he had nearly abandoned the thought of mentioning the matter, but it had been taken up by the *Edinburgh Review* in an article written by one of the first authorities of the day, and this determined him to bring the case before the section. He then went over and enlarged upon the points of his letter. Mitchell, in a paper read before the Philosophical Society, stated his theory in this way:—"Let a star be given in the apparent position A. Let other stars B C D be scattered over the heavens as chance

might direct. Now, on the assumption that a star might as likely be in one position as in another, the probability of A and B being within a degree of each other, supposing they were the only two stars in the whole heavens, would be in the ratio of a circle of one degree radius to a great circle, or as 1 to 13,131. In other words, there was almost a moral certainty against their being in the proximity supposed." In regard to this argument, Professor Forbes said that, on the supposition of a random scattering, he could not conceive how one spot should be more probable or improbable than another as the position of a particular star, or how it was more unlikely that the star B should be within one degree of A than that it should be 180 degrees from it. Suppose that a person totally unacquainted with the game of chess were shown a chess-board with two, or even five or six, pieces on it, standing in close proximity to each other, the fact of this proximity would not be sufficient to enable him to discover whether it was the result of chance or of design. Let an experienced player step in, and he would be able to say almost at a glance whether the pieces had been placed in the positions they occupied designedly or not. His estimate, however, of the probability of this was only a relative one, and could not be accurately expressed in numbers. This illustration might easily be applied to the case of the stars. Other suppositions, illustrations, and arguments were brought forward to show that the numerical values applied to the probabilities against double and triple stars by Mitchell and his successors were wholly hypothetical, and so far as Professor Forbes could see, were not fitted to give the slightest indication of the probable distribution of the stars. He stated that Mitchell's views had been adopted by almost every writer of eminence, whether on astronomy or on the theory of probabilities, who had had occasion to allude to them—as Struve, Herschel, Laplace, &c. His convictions, however, were that the fundamental principle of Mitchell was erroneous—that all the numerical calculations of his successors were erroneous, and that all that could be said was, that special collocations inevitably force on the reasoning mind an impression to some extent, but necessarily vague, of causation. But he hoped that the views which he had just expressed would meet with a calm and impartial consideration from the eminent men before him, who were so well qualified to form a sound opinion on the subject.

Mr. Otto Struve stated that, at the Observatory of Pulkowa, the theory of double and triple stars had long formed the chief subject of investigation, and that he was, therefore, able to speak pretty confidently on the subject. He did not think that the reasonings of Professor Forbes were sufficient to overturn the results at which Mitchell and his successors had arrived. A work on this subject, we understood, would shortly issue from the Pulkowa Observatory.

Professor Smyth also opposed the views announced by Professor Forbes. He said that the analogy drawn between the operations of the Creator's hand and a painter's brush was worthy of being characterised in very strong terms of reprobation. And as to the manner in which it had been given to the section, he regretted that the subject had been brought up at all, and it need not have been, since the author of the paper had already had an opportunity of conversing with most of the gentlemen present, and learning their views. Moreover, he did not think it delicate to introduce the subject in the presence of a foreigner who had not a sufficient command of our language to stand up and speak in defence of his eminent father. He, Professor Smyth, was bordering upon strong personal remarks, when the Astronomer Royal rose to order.

The president (Bishop Terrot) thought Professor Smyth's remarks too severe, and he certainly did not consider that M. Struve had been attacked by Professor Forbes.—The latter disclaimed any attack of Struve.

Professor Stevelly considered the subject to be one of the deepest interest to science, and he was thankful to Professor Forbes for manfully grasping it. Numerical values, he thought, could not be assigned; it was perfectly impossible.

M. Otto Struve again rose and addressed the section at some length in German, attempting to prove more distinctly than his want of acquaintance with the English language had previously allowed him to do, that Mr. Mitchell's calculations of probabilities were founded on sound principles.

Professor G. G. Stokes said that Professor Forbes' illustration of the paintbrush did not go far to establish the truth of his views. It was to be expected that drops starting from the brush should follow nearly the same path, and it was not improbable, therefore, that there should be series of double and triple drops. He conceived, however, that there was some degree of evidence of physical connexion. In regard to the possibility of obtaining numerical values of the probabilities, he said—Suppose that the starry sphere was divided into a great number of equal solid angles, and that it was equally probable that any particular star should be in one solid angle as in another. This being admitted, the rest followed as a matter of pure mathematics. Professor Forbes seemed to suppose that the theory of an equable distribution of the stars naturally followed from the definitions from which Mitchell and his successors had started. Now this was by no means the case. Suppose four boxes of equal area and four shot; it being assumed that any particular shot was as likely to fall into one of the four boxes as into another. Was it probable that in these circumstances one of the shot should be found in each box? By a simple calculation it would be seen that the chance of the four boxes being occupied was as 3 to 32, or that there was a chance of 29 to 3 against equable distribution. The same reasoning might be applied to the stars, but the odds in that case would be increased most enormously.

Professor Thomson observed, that if, through a great series of years, it were ascertained that the fixed stars approached nearer to each other, then a physical connexion would be established. So we understood him, at least; and also that he concurred with Professor Forbes as to the impossibility of expressing numerical values of the probabilities.

After a few remarks from Professor Nichol, in favour of the theory of probabilities, Professor Forbes, in reply, said he had not introduced the paint-brush as an argument, but merely as an illustration. The illustration of a quantity of sand, riddled through a sieve at a considerable height from the ground, would have served his purpose equally well. He was very much obliged by the suggestions which had been thrown out by the different speakers on the subject of his paper, and he should endeavour to avail himself of them, so as to correct anything erroneous that might attach to his views.

4. Some time ago, Mr. Nasmyth's attention had been directed to the remarkable appearances on the surface of the moon, in connexion with the light they seemed to throw on the study of Geology, and he had procured some considerably powerful telescopes in order to observe them more particularly. He exhibited to the section a variety of drawings from nature which had been taken by himself from what he had observed. The largest was a map, on a great scale, of the entire lunar surface, on which was strikingly depicted the peculiar nature of its surface, crowded with crater-like cups, in some places so close as to overlie each other, and, as it were, elbow each other out of the way. The other views were various portions of the surface which had been selected for more minute study. These representations had all been drawn from observations made in the most favourable circumstances, and with great care; and the result was, that the conclusion was even stronger than in the case of the earth—that it was once wholly in a molten condition. The central cones observed in three-fourths of the lunar mountains show plainly that the formation observed is volcanic. These cones, in the case of terrestrial volcanoes, are the result of the expiring action of the volcano, after the eruptive energy has ceased to be able to project the molten mass over the sides of the crater. And the same thing has taken place in the moon. Many of its volcanoes are sixty or seventy miles across the crater—many times larger than those on the earth. But it is just because it is a very small body that it has very large volcanoes. The force of gravitation is much less at the moon, and hence the ejective force is able to expel greater masses, and to act more uninterruptedly. The crater of Etna is but a spot compared with some of those in the moon. The proportional size he illustrated by a plaster model. The smallness of the moon, its mass being to that of the earth as 1 to 64, and its surface as 1 to 16, was the cause of the multitude as well as magnitude of these volcanoes. As the outer crust cooled, the moon would become, so to speak, hide-bound, and, by the contraction of the surface upon the liquid mass beneath, the latter would be spurted out in every direction, while the former would also exhibit those radiating striæ or cracks which are so very marked a feature in its appearance. Some of the cracks were upwards of 700 miles long. In illustration of the mode in which it was probable this appearance was produced in the moon, he showed portions of glass globes, which, after being filled with hot water, and then hermetically sealed, were broken by the application of cold to the outside, producing cracks arranged in precisely the same order as the corresponding cracks on the surface of the moon. In all his inquiries he had endeavoured to put the moon herself into the witness-box, and obtain her answer; we might not, however, always translate that answer aright. Besides the craters and these cracks, there are also many trachytic domes, where the force of ejection has not been sufficiently great to form craters; and, lastly, there are great ranges of hills, the formation of which appears to have taken place in this way:—as contraction goes on, the liquid nucleus separates itself from the solid crust; the latter is bent inwards by the force of gravitation, and a cracking and crushing action takes place, with further eruptions in mountain crests, or two adjacent surfaces are raised edge on edge, as in fields of ice. A shrivelled apple afforded a familiar illustration of this appearance and its cause, and applying the same rule to the earth, it appeared to him to give a most simple and beautiful explanation of mountain ranges.

Professor Nichol said, he was sure he was giving utterance to the opinion of every one present, when he said that the drawings which had been exhibited by Mr. Nasmyth were the most beautiful and faithful representations of the surface of the moon that had ever been constructed. He had little doubt that Mr. Nasmyth's investigations would ultimately lead to the most important results, especially in relation to the science of geology.

Mr. Hopkins admired the beautiful representations which Mr. Nasmyth had given, and no less his simplicity and earnestness of purpose. The experiment by which the radiating striæ were produced in the glass globes confirms what he (Mr. Hopkins) had deduced from abstract investigations many years ago. And he believed it most probable that what were termed parallel lines of formation may be found to be characterised by the law of radiation. If we could see only a portion of the 700 miles, we would have an approximate law of parallelism apparently, but a real law of radiation. Some geologists had ascribed the formation of craters to mere *soulèvement*, but he considered the views of Mr. Nasmyth correct. But he is not sure that his account of the solidification of the liquid mass is the true one. According to the theory of Poisson, solidification may have been produced by great pressure. It had not yet been sufficiently

determined whether the temperature of fusion may not be affected by the pressure to which the materials are subjected. He wished to direct the attention of Mr. Nasmyth to this inquiry.

Mr. NASMYTH remarked that the cooling is always downwards towards the centre, which remains liquid for some time, as in large spheres cast in founderies.

Mr. HOPKINS said the pressure required to be exerted in experiments must not be a small one, but twice as great as that exerted by the hydrostatic press in raising the Britannia Bridge.

Professor THOMSON stated that the conclusion to which his elder brother had come in a paper of his, was, that those bodies which expand in solidification have their freezing point lowered by the application of pressure, and *vice versâ*. This law had been verified by himself (Professor Thomson) in an experiment on the freezing point of water, which was lowered nearly a quarter of a degree by a pressure of about sixteen atmospheres. On the other hand, if rocky substances contract in solidifying, we should have very strong reason for concluding that the solidification of bodies is promoted by pressure.

5. Mr. DENNISTOUN exhibited a veil of the consistency of gossamer, forty-two inches by twenty-four inches, made by caterpillars ascending an incline, their course being directed by lines of olive oil to produce the tissue. He had found an account of a similar product by caterpillars by the directive agency of parsley paste, but he had only seen two besides his own; one of which, seven inches by five inches, obtained at Munich, with a picture drawn on it, was also shown.

Sir D. BREWSTER then directed attention to a number of beautiful Talbotypes from negatives on albumen, by Messrs. Ross and Thomson, Edinburgh, and by M. Constant, of Rome; from negatives on paper, by Samuel Buckle, Esq., Peterborough; and from negatives on gelatine, executed in Paris by M. Balard. The Edinburgh productions were very fine and sharp, and of a good colour; but in tone, and in every other respect, the two by M. Constant were the finest we have yet seen.

6. Mr. READE explained the construction of his new solid eye-piece. In using the negative eye-piece we are annoyed by false light, and a false image popularly termed "the ghost of the Star." Filling the eye-piece with water removes these inconveniences, and converts it into a positive eye-piece. There is then only one image, and the field is completely dark. Another advantage of this arrangement is the removal of a great deal of the heating power of the sun's rays, so that it can, with much less hazard, be looked at through a small aperture.

7. Sir W. HAMILTON's paper, together with another containing the same solution, but of a totally different character, will shortly appear in the *Mathematical Journal*.

No. 8 was given in our Supplement to *Literary Gazette*, No. 1751.

No. 9 was a meteorological paper standing over from Monday. A series of ingenious and beautiful diagrams, evidencing to the eye the tabular results of the observations by an Osler's anemometer, were exhibited.

SECTION B.—(*Chemistry.*)

1. Dugald Campbell, Esq., on the action of the soap-test upon water containing a salt of magnesia only; and likewise upon water containing a salt of magnesia and a salt of lime.

2. Professor Buckman, remarks upon some curious chemical facts connected with Roman tesselated pavement. *Illustrated by full-sized drawings of two fine examples.*

3. William Petrie, Esq., the phosphorescence of potassium.

4. Dr. George Wilson, on the presence of fluorine in blood and milk.

5. Professor G. T. Mulder, on the presence of carbonates in blood.

6. Dr. Anderson, on a compound of iodine and codeine.

7. James Stein, Esq., on a new method of separating arsenious from arsenic acid; and on its application to the determination of nitric acid.

1. Experiments with the soap-test upon water, of which the actual composition was known, with reference to the rule given by Professor Clark, to infer the degrees of hardness from an ordinary analysis. The inferences drawn by Mr. Campbell were—1st. That water containing sulphate of magnesia alone acts towards the soap-test in producing with it a perfect lather, similarly, or nearly so, as also does water containing a lime salt alone—but only when the equivalent of magnesia salt does not exceed six grains of carbonate of lime in a gallon of water. 2nd. That the degrees of hardness of an ordinary water cannot be inferred by the rule—compute the grains of lime, magnesia, oxides of iron, alumina in a gallon of water, each into its equivalent of chalk; the sums of those equivalents will be the hardness of the water. 3rd. That the degrees of hardness of a water containing magnesia and lime salts, as shown by the soap-test as it is now applied, cannot, in almost every case, be taken as representing the amount of these salts in the water; nor in nearly every instance can it be considered as giving the amount of lime in a water when magnesia is present. 4th. That water might show by the soap-test a small degree of hardness in comparison to the considerable quantities of salts of magnesia and lime it might contain; and trusting to this method of analysis alone when selecting water for ordinary use and for steam purposes, might lead to a water being adopted which might not be conducive to the general health, and which would leave considerable deposit in vessels in which it was boiled—a great deterioration to its use in steam generating.

3. This interesting property of Potassium has not, Mr. PETRIE believes, been hitherto observed, nor even suspected. It was not accident that led him to observe the fact: but, while speculating on the consequences of the dynamical theory of heat, he was led to the conclusion that cold potassium ought to be found *luminous*, and farther, that it ought to be only about a tenth part as luminous as phosphorus.

On testing this, experimentally, as soon as an opportunity allowed, with the precautions for sensitive vision, which the anticipated feebleness of the light indicated to be necessary, the result was, that on dividing a bit of potassium, (which was quite dry, being protected only by a coating of bees'-wax) the halves showed two *distinctly luminous sections;* the light being about a tenth part of that from a similar surface of phosphorus. The light diminished, naturally, as a protecting coating of oxide was formed, but remained just perceptible to the most sensitive sight as long as half an hour. The paper concluded with the considerations which led theoretically to this fact.

4. Dr. WILSON having recently repeated, on a large scale, his search for fluorine in blood and in milk, has obtained satisfactory evidence of its presence in both; and he conceives it to exist therein in the state of fluoride of calcium. He has also confirmed the fact communicated by him to the meeting at Southampton, that fluoride of calcium is soluble in water.

6. This new compound, from the spontaneous evaporation of alcoholic solutions in equal parts of iodine and codeine, is deposited in crystals of a deep purple colour by reflected, and of a ruby red by transmitted light; when powdered, the colour is cinnamon brown.

SECTION C.—(*Geology and Physical Geography.*)

1. Professor Ramsay, on the geological position of the black slates of the Menai Straits.

2. M. Martins, parallele entre les terrains superficiels du basin Suisse, et de la plaine du Po.

3. Mr. R. Austen, on recent changes of sea-level.

4. Professor Oldham, additional observations on the temperature of mines in Ireland.

5. Rev. P. B. Brodie, on the inferior Oolite near Grantham.

6. Mr. Hugh Miller, on certain extraordinary peculiarities of structure on the more ancient Ganoids.

7. Professor Sedgwick, on the palæozoic rocks of the south of Scotland.

8. Sir Roderick I. Murchison, to explain the progress of the great work on the Silurian rocks of Bohemia, by M. Barrande.

9. Dr. Anderson, on the fossil fishes and the Yellow Sandstone of Dura Den.

10. Professor Edward Forbes, notices of some remarkable forms of fossil radiata.

11. Professor J. D. Forbes, notes on the topography of Switzerland.

12. Professor Parlatore of Florence, to communicate an account of the occurrence of fossil plants in the Verrucano of Italy.

13. Lieutenant Strachey, Bengal Engineers, notice of recent researches in the Himalaya.

14. Lieutenant-Colonel Portlock, on the intrusion of the Trap rocks into the conglomerate on the shore between Tantallon and North Berwick.

15. Mr. Nasmyth, on the structure of the lunar surface, and its relation to that of the earth.

16. Dr. Mantell, notice of a specimen of upper jaw of Iguanodon.

17. Mr. William Stevenson, on a quartz formation in the south of Scotland.

18. Notices of earthquakes in South America in the years 1844-5-6-7. By Mathie Hamilton, M.D., formerly surgeon of the Potosi Mining Company.

19. Stevenson Macadam, Esq., remarks on the central heat and density of the globe; as also the causes of volcanic phenomena.

The list looks enough for a week's work, and the section did also encroach upon the Wednesday.

1. The author briefly sketched some of the details of work that led the Geological Survey of Great Britain to certain conclusions respecting the age of the black slates of Menai, &c. These slates had previously been considered by Professor Sedgwick to underlie the purple and green slates and sandstones of Llanbius, and therefore to be the lowest member of the Carboniferous group of Wales. Mr. Sharpe included them with a part of the Upper Silurian strata. It was now shown that they belong to the Lingula beds, the lowest member of the Silurian series, these gradually folding round the purple sandstones, between Bethesda and Aber, where they are cut off by a north-east fault, throwing them down on the north-west. From thence they extend to the country south of Carnarvon, interrupted only by the second outcrop of the Cambrian strata near Bangor, and by a mass of intrusive trap. The rocks of the higher part of Snowdon, &c., are the equivalents of the Bala Limestone, and its underlying volcanic ashes, the igneous portion of these beds prodigiously thickening out from the Bala country to the north-west, whereas the underlying igneous series of Merionethshire (Cader Idris, Aran Mowddwy, &c.) thins out and disappears before reaching the parallel of Snowdon. The Greenstones are not of contemporaneous origin with the ordinary strata, though apparently interstratified with them in the same manner as the felspathic traps and ashes. They seem thrust in between the comparatively undisturbed beds, the whole having been subsequently disturbed together. There are other masses of intruded felspar trap of a granitic character of later date, (Llanbius, Carnarvon, the Rivals, &c.) for various reasons of detail probably of older date than the Old Red Sandstone.

2. Professor NICHOL read a translation of M. Martins' paper, the author himself being present. Sir R. Murchison noticed the continental reputation of the author; and Mr. Smith, of Jordanhill, remarked that the difference between our boulder clay and that of the Continent was, that the fragments of rocks here became smaller, there larger, as they receded from their origin. Here they are rounded, there they are angular.

4. In the shallow part of the mines there was a rise of 1° for every 52 feet; at a depth of 1200 feet the rise was 1° for every 85 feet. Sir R. Murchison remarked, that many observations would yet be necessary before a theory could be formed on this subject, and considered the fact that had been stated as one of great importance. Professor Sedgwick alluded to several causes, mineralogical, metallic, and electric, that might have a tendency to produce this result, which was not an exception to the general law, but an example of excess. Professor Oldham replied that note would soon be taken of electric currents; and that after the number of men and horses had been greatly increased in the mine, the temperature was still decreasing.

6. Mr. MILLER began by stating that it was his

purpose to introduce to the notice of the Association a curious suite of fossils from the Lower Old Red Sandstone of Scotland, many of which were still without duplicate in the public museums of the empire, and but imperfectly represented in those of Russia. In one important respect there attached to them a peculiar interest. They belonged to the earliest animals of the vertebral division, of which our knowledge was rather inferential than direct. The most ancient fishes known to the geologist were the Placoids of the Silurian System; the next most ancient the Placoids and Ganoids of the Lower Old Red Sandstone. Of the placoids, however, little comparatively could be known; from their perishable cartilaginous structure an entire species might be represented by but a few spines, teeth, or shagreen points; whereas the ganoids, from the peculiar armature of solid bone in which they were enveloped, continued to exist, not as mere ichthyic fragments, but as ichthyolites. Hence our absolute knowledge of the ancient forms and mechanism of ichthyic life was mainly to be derived from the study of the first ganoids. In a specimen of *Pterichthys* submitted to the section, for example, the very capsules of the eyes were preserved; and we had evidence of at least the three senses with which these earliest of the ganoids took note, in an incalculably remote period, of the sights, sounds, and odours of the material world. He called attention to a peculiarity in the mouths of some of the existing placoids. In some of the sharks the teeth took exactly the form of the external shagreen. The tendency of tubercles to assume the form of teeth in the ancient ganoids, and of teeth to assume in some of the existing placoids the appearance of shagreen, seemed a curious and not uninstructive circumstance; and threw light on some otherwise puzzling peculiarities in the dental structure of ichthyolites, such as the Coccosteus and Asterolepis. He had lately succeeded in procuring a cerebral plate of the Asterolepis, that presented one of the sockets in which the under jaw of that animal had acted, and which, in one respect, resembled the sockets of the jaw of the Lepidosteus of America,—one of the few reptile fish which still continue to exist. In the under jaw of a large Thurso ichthyolite, of the reptile family, still unnamed and undescribed, and some of whose internal bones could not at the present stage be distinguished from those of Asterolepis, the under jaw seemed to consist of five pieces—first of a central key, like that of the Dipterus in its fœtal state; next of two side bones, that were united to it; and lastly, of two slender bones, that seemed to occupy a similar place in the under jaw of this fish as the intermaxillary bones do in the upper jaws of most other fishes. Mr. Miller next proceeded to describe the under jaw of the Coccosteus, as one of the most extraordinary of the period, or perhaps of any period.

The PRESIDENT (Sir R. Murchison) said that he could scarcely express the gratification which he felt at hearing this communication from his friend, Mr. Miller, who had this day exhibited to their notice, amongst other things, the wonderful manner in which comparative anatomy can illustrate geology, and had shown a number of coincidences between the fishes of the Old Red Sandstone of Scotland and those of Russia, the latter of which he (the President) had examined in that country. It was very gratifying to him to find that Mr. Miller had worked out a problem which was dark and obscure, and particularly in regard to that gigantic fish now called the Asterolepis.

Professor SEDGWICK took a review of the progress which had been made of late years in exploring the Old Red Sandstone formation. He felt proud in thanking Mr. Miller for having thrown such a flood of light as he had just done upon a dark and difficult subject; and also in thanking him for those works with which he had instructed them and warmed their hearts, besides having adorned that science in which he was labouring with so much skill, success, and acceptance.

9. Dr. ANDERSON's paper began by tracing on two admirable sections the series of rocks included betwixt the Grampians and the Lammermuirs, in which he pointed out the characteristic fossils of the several strata, as well as their geognotic relations to each other. Dura Den occupied a central position, and consisted of the upper member of the Old Red Sandstone. The splendid collection now on the table were all obtained from a small portion of the rock in the lower beds, and consisted of several new generic as well as specific forms, making in all seven or eight new genera of fossil fishes, detected in this interesting locality. Mr. Miller had succeeded in establishing a strong family affinity betwixt the *Pterichthys* and the *Pamphractus*, and although he had yesterday obtained the favourable decision of Sir Philip Egerton, Professor E. Forbes, Mr. Pentland, and Dr. Fleming—already committed on the question—still he thought there was much to be said on the other side. The Doctor pointed out four or five characteristic distinctions which he thought went far to establish, if not a generic, most certainly a strong specific difference, and to confirm the conclusions of Agassiz. He concluded a long and elaborate paper by alluding to the structure of the scale of the Holoptychius, as analysed by Mr. Miller, and on which he had raised, said the Doctor, an instructive argument of design, benevolence, and wisdom, such as nowhere, he would venture to affirm, in Paley or out of Paley, had been so admirably and irresistibly conclusive.

The PRESIDENT having asked Mr. Miller if he had anything to say, after the remarks that fell from Dr. Anderson,

Mr. MILLER said, that a jury sat upon this matter, after mentioning whose names the section would feel assured that they were competent to judge; and he did not think that the additional explanation made by Dr. Anderson would have had any effect upon them in altering their decision. The new ground on which Dr. Anderson now sought to constitute a new genus was, as if a man with his arms extended belonged to one genus, while with his arms by his side he belonged to another.

Rev. Mr. LONGMUIR, of Aberdeen, said he had no claim to be considered a palæontologist; but he might be considered competent to bear witness of what he had seen. In opposition, then, to Dr. Anderson's distinction, he had in his own collection a beautiful specimen of Pterichthys, from the north, with the arms by its side; and he had seen another in the collection of Mr. Duff, of Elgin, which would require, according to Dr. Anderson's theory, a new genus for itself, as the one arm was extended, while the other lay by its side.

Professor SEDGWICK then described the Palæozoic Rocks of the south of Scotland.

SECTION D.—(*Natural History.*)

1. Dr. Carpenter, on the reparation of the spines of Echinida.
2. Dr. Carpenter, on the gigantic foraminifera of the Eocene period, and their existing representatives.
3. Dr. Mantell, on the dental organs of Iguanodon.
4. W. Thomson, Esq., of King's College, London, on the lingual teeth of the British pulmono-branchiate mollusca. Communicated by Professor Edward Forbes.
5. Mr. James Hardy, on an acaris and vibrio that attack grasses. Communicated by Dr. Douglas Maclagan.
6. Dr. Hugh Cleghorn, on grasscloth (Chu Ma), the produce of Böhmeria nivea.
7. H. E. Strickland, Esq., on the development of the tail feathers of Vidua paradisea.
8. John Wooley, Esq., on the birds of the Faroe Islands.
9. J. Gould, Esq., F.R.S., notice of the ornithological collections made by J. M'Gillivray, Esq., on the north coast of Australia.
10. A. Strickland, Esq., on the changes of colour of British birds.
11. R. M'Andrew, Esq., record of the distribution of marine animals in depth, in a cruise from Vigo to Tunis.
12. Dr. Lankester, report on the registration of periodic phenomena.
13. W. T. C. Thomson, Esq., notice of the application of photography to the compound microscope.
14. Rev. T. Rankine, zoological memoranda.

5. In investigating this peculiar structure, the first thing that might astonish the people was, that it was the produce of a species of nettle. The first mention he found of it was in 1698, afterwards in a history of Japan, and by the great botanist Thumberg. The plant occurred in India and China, and a coarse cloth was made from it for the summer dress of the poorer classes, while a much finer was made for the use of the rich.

8. Mr. WOOLEY gave a sketch of the relative situation, geological structure, and climate of the group, with a reference to their organic productions, as far as these had any bearing on the presence or absence of various kinds of birds. In illustration of the abundance of certain kinds of food, was mentioned the phenomenon of the sudden rise of a compact shoal of small marine animals, which, on the testimony of an intelligent native, has given origin to Pontoppidan's story of the kraken, or large flat sea-monster, called in Faroe kraka, or teara-bue. The snow bunting and the purple sandpiper, both of which frequent the tops of mountains, were the only species of bird not known to breed in Britain. The fulmar, about ten years ago, began to establish itself on the cliffs of Faroe for the first time. Many species reported to breed there by other authorities were not to be found. Several traditionary particulars about the great auk were given. After many observations on the habits of the different birds, their relative numbers, and the etymology of their names, Mr. Wooley concluded by deducing a lesson from the mode in which the birds are treated by the human inhabitants. Although numbers are caught at stated times, yet as a whole they rather increase than diminish, for they are not constantly annoyed as they are round the coasts of Britain. Both the established rights of the bird-climbers and the interest of our coast navigation require that the sea birds should be protected. In foggy weather they warn vessels of their approach to the dangerous headlands which they chiefly frequent. Already they are very greatly diminished in numbers, and the persecution is constantly increasing. On the Yorkshire coast slaughtering parties arrive by trainsful. It is a matter well worthy the attention of the Legislature. The protection afforded to them in the vicinity of one or two lighthouses on the west coast, and also round the Bass Rock and Ailsa Craig, are pleasing exceptions to the general rule, and show what may be done.

Ethnological Sub-Section.

1. E. Norriss, Esq., notice of a vocabulary of the Mandrawe language (African). Communicated by Dr. R. G. Latham.
2. Dr. R. G. Latham, remarks on Mr. Norriss's paper.
3. E. Norriss, Esq., notice of a vocabulary of a Sudama language (African).
4. F. Newman, Esq., notice of a dialect of the Berber language. Communicated by Dr. Latham.
5. Professor P. A. Munch, of Christiania, ethnological observations suggested by the philological characteristics of the remarkable Anglo-Saxon Runic inscription at Ruthwell, in Galloway.
6. Dr. R. G. Latham, on the distribution of the Germanic, Lithuanic, and Slavonian tribes, at the beginning of the Historic Period.

Physiological Sub-Section.

1. Mr. Newport, remainder of paper on vital and physical forces, commenced in Natural History Section.
2. Dr. G. Wilson, on the existence of fluorine in blood and milk.
3. Dr. Bennett, F.R.S.E., on the molecular element of growth in plants and animals.
4. Dr. W. T. Gairdner, on some facts in relation to pathological cell-development.
5. Mr. Sanderson, on the supposed relation of the spleen to the development of the coloured blood corpuscles.
6. Dr. Seller, on a physiological mode of investigating the metaphysical difficulties in regard to the origin of the notions of space, of motion, of the external, of substances, &c., in connexion with the laws of nervous action.
7. Dr. Fowler, on the influence which our instinctive propensities have on our intellectual and active powers,—that is, on acting in consequence of thinking.
8. Dr. Simpson, on the reproduction of the limbs after amputation in the human subject; with specimens.
9. Dr. Coldstream, suggestions regarding the expediency of ascertaining the extent to which infantile idiocy prevails in Great Britain and Ireland generally, and of inquiry into the causes of its prevalence in certain quarters, with a view to the adoption of some means of deliverance from it.
10. Mr. Zaglas, a general view of the morphology of the muscular system.
11. Mr. Spence, on some points in regard to the ligature of arteries.

Dr. LATHAM had the day nearly to himself, and an exceedingly scanty audience; sometimes not above three or four in number. We cannot therefore expect that any Report of the learned subjects which he brought forward, and animadverted upon with equal learning, could be made acceptable to the general reader. We hope to obtain a copy of the Runic Inscription for some future *Gazette*.

Of the Physiological Sub-Section some of the papers could only partially be brought forward, and none of them suit our page.

SECTION F.—(*Statistics.*)

1. Wm. Thomas Thomson, Esq., the statistical facts observed in investigating the progress of the fund established for a provision for the widows and children of the Ministers, and of the heads, principals, and masters of the Universities of Scotland, from 1744 to 1849.
2. Professor Hancock, some statistics respecting the sales of encumbered estates in Ireland.
3. A. Milward, Esq., some remarks on the city and neighbourhood of Malaga, and on the preparation of raisins.
4. John Strang, Esq., LL.D., on the recent progress of Glasgow in population, wealth, commerce, and manufactures.

1. Of considerable interest in Scotland, tracing the fund from its commencement in 1744, and establishment in 1774, by Act of Parliament, to the present date. A few of the leading results brought out were, that the average number of members during the period stated was 1020; that the average age of the living was about 48·9; that the average age of entering the church was 28·9; that the average duration of the lives of the members after admission was 33·4 years; that the average duration of the life of each widow after her widowhood was 19 years; that the average number of widows existing at one time was 338; that the number of ministers who died yearly was, on the average, 29·850.

2. Ably discussed four very important considerations, viz:—First, Does it appear that any necessity existed for establishing the cheap, simple, and expeditious forms of procedure of the Encumbered Estates Court, in lieu of the proceedings previously required in the Courts of Chancery and Exchequer? Secondly, Is there any evidence of the parties most interested having confidence in the proceedings of the court? Thirdly, At what rates of purchase have the estates been really sold? Fourthly, To what cause is the difference of prices realized for the different classes of estates to be ascribed?

The paper at length, which we have before us, would fill two of our pages, which it is out of our power to allot to it. The examples on which the Professor's conclusions rest, display an extraordinary previous condition of social life in Ireland, of an almost common state of embarrassment and ruin, and of the intolerable procrastination and extortion of the laws—some suits having lasted for seventy years. The Court of Equity appears to have been a destructive mockery and snare. In short, the inheritors of estates were virtually disinherited by it.

"The rapid sales under the Encumbered Estates Court, therefore, do not cause the ruin of puisne encumbrancers—they only make manifest the ruin which the costly and dilatory proceedings in the Court of Equity had already brought upon them, but which the complicated forms of procedure of those courts concealed for a time; and when a loss is inevitable, it is manifestly far better that the parties to suffer should know at once the full extent of their loss, than that they should be kept in a state of anxiety, and be induced to waste their time and their money in seeking to establish claims that, however established, can never be paid.

"So that whether we consider the proprietor, the encumbrancer, or the community at large, it is manifest that an absolute necessity existed for establishing some cheap, simple, and expeditious form of procedure, in lieu of the costly and dilatory proceedings in Equity."

Respecting the second question, the statistics of which are also amply stated, the Professor concludes there is no serious depreciation of the value of land in Ireland, for where the land itself is sold, it brings twenty-two years' purchase; that there is a depreciation to the extent of five years' purchase in the value of complicated and precarious interests in land—which depreciation arises from the state of the law respecting those interests, and which can be removed by wise legislation.

It is particularly important to attend to causes of depreciation arising from legal technicalities; because such causes arise entirely from human legislation, and are, therefore, within human control; and, being removable by the legislature alone, for such causes the intelligent portion of the community are responsible.

These statistics also show the fallacy of the opinion that the low price for which many estates sold, arises from want of capital; for such a course would affect all estates in fee as well as leasehold; and we could not have twenty-two years' purchase given with a scarcity of capital and consequent high rate of interest.

They explain, too, why so few Englishmen and Scotchmen have purchased. Because the land is really going for its full, fair, and present value—and it would require such a depreciation as would give great bargains, to induce Englishmen and Scotchmen to change their residences.

That the want of a perfect Parliamentary title is one chief cause of the depreciation of leasehold interests, but easily remediable.

These results must be a matter of extreme satisfaction to every one who has investigated the causes of distress in Ireland—as it is admitted on all hands that the state of the law, coupled with encumbrances on Irish estates, preventing the land of Ireland being a marketable commodity, is the great cause of distress.

When the Encumbered Estates Commissioners have sold the twenty millions' worth of land with a Parliamentary title, which they will in a short time do, we shall no longer see the anomaly, disgraceful to our civilization, of 4,000,000 of acres of waste land, capable of improvement, being unproductive, whilst hundreds of thousands of labourers cannot get employment, and capital at the rate of 1,000,000*l.* exported to England for investment. Here are the three elements of production in abundance, land, labour, and capital, nothing wanted but the necessary protection to their exercise which human laws are instituted to afford, and which they alone can afford. The Parliamentary title of the Encumbered Estates Commissioners will emancipate the land from the impediments that hitherto doomed it to barrenness; will place it in the hands of those who can make the best use of it; for those who can produce most from the land can give the highest price for it. The Parliamentary title will give perfect security for all capital employed in that first of human occupations, the production of human food. The employment of capital will necessarily lead to the employment of labour, thus all classes in the community will be benefited together, and the mutual co-operation naturally resulting from the free intercourse of enterprising capitalists, and industrious, because well paid labourers, will lead to that peace and good feeling between different classes to which, in the artificial state Ireland has been placed, they have long been strangers.

SECTION G.—(*Mechanical Science.*)

1. Mr. George Buchanan, on improvements in valves and stop-cocks for regulating the passage of fluids. Illustrated by experiments and working model.
[Read in Professor Donaldson's class-room, where a convenient supply of water was at hand.]
2. Professor Donaldson to exhibit and explain an apparatus invented by the Baron de la Tour, for producing musical sounds below water.
3. The Astronomer-Royal to exhibit specimens, illustrating the construction of the pivots of the new transit circle for the Royal Observatory, Greenwich.
4. The President, Sir David Brewster, to communicate a note from Mons. Jules Guyot on his priority of the invention of the tubular bridge.
5. The President will also communicate a notice of a tubular crane by Mr. W. Fairbairn.
6. Mr. Smith, in a letter to the President of the Association, will describe the construction of the rubble bridge at Ashiestiel.
7. Mr. Petrie, on a fixed scale for electromotive force in galvanometry.
8. Mr. Petrie, on the dynamic equivalent of current electricity.
9. Mr. Petrie, observations on the application of heat and electricity as moving powers.
10. Mr. Petrie, on a tabular view of the powers of various kinds of galvanic batteries.
11. Mr. Petrie, on the powers of minute vision.
12. Professor C. P. Smyth, on a telescopic sight for rifles.

In coming to the last section of Tuesday, we may note that there was no subsequent report published of the papers actually read on that day; and that some of those which appear upon the foregoing lists were merely announced, and the titles given.

1. Without the model, and reference to it at every turn, working its wheels, stopping its valves, &c. &c., only a most imperfect notion of this paper could be communicated. There appeared to be introduced new principles of action for working hydraulic and other kinds of machinery for regulating the passage of fluids with a degree of ease and facility not hitherto attained, and with more precision in the regulation of the level applicable to the feeding of cisterns, boilers of steam-engines, valves, and stoppers for ventilation, &c., all involving two great and leading principles, viz.—1st. The introduction and use of a flexible substance, such as vulcanized India-rubber, in the form of a membrane distended over a hollow circular or annular cavity, on which the bearing surface or mouth of the valve orifice is brought to bear, and to be resisted by the strength and elasticity of the whole particles of the membrane called into play, and forming, moreover, a smooth and even surface peculiarly adapted for forming that nice and intimate contact of surfaces necessary for the closing of the valve, and sealing it, to the perfect exclusion of the fluid under pressure. 2nd. The use of the flexible substance, not merely as the bearing surface and the valve orifice, but as the medium by which the pressure of the fluid, either of water, steam, or others flowing in the main pipes, could by a very simple arrangement be brought to bear upon the flexible substance, and communicate this pressure to the lid of the valve, so as to close it at once and effectually, even in the case of valves or cocks of the largest dimensions, by the opening or shutting of a small orifice, which is capable of being done with the touch of the finger.

2. This curious apparatus is a cylinder in a plate of brass, which, perforated with oblique holes at some distance from the circumference, is made to revolve by a jet of atmospheric air. The results of the experiments went to suggest that, since the melody of the tones produced was in a direct ratio to the height of the column of water employed, a time was not far distant when an instrument of yet-unheard-of power, and still preserving completely melodious notes, might be constructed.

4. The President, Sir DAVID BREWSTER, communicated the substance of a note addressed by Dr. Jules Guyot to the Abbé Moigno, claiming priority in the invention of the tubular bridge. Dr. Guyot had taken out patents in France in 1844 and 1845, and one in England in 1846, in the name of M. Jacquemot, for a tubular girder, composed of hollow rectangular parallelopipeds, or cells, formed either of bars or frames of iron united by pins, or made of one piece of cast iron. This was certainly an anticipation of Mr. Stephenson's idea of a tubular bridge as suggested in 1846 to the Committee of the House of Commons; but Mr. Stephenson subsequently founded his claim to that invention upon his bridge at Ware, erected in 1843. Sir D. Brewster, however, stated that a tubular girder bridge, far more like the Menai bridge than the Ware one, was erected in 1840 or 1841, by Mr. A. Thompson over the Pollock and Girvan Railway, near Glasgow, who had thus anticipated both Mr. Stephenson and Dr. Guyot; Sir David added, that Mr. Macquorn Rankine now present could give some information respecting this bridge.

Mr. RANKINE said, that he had seen the plans of this bridge, and that the deviation from the rectangular form of the girder mentioned by Sir D. Brewster, arose from the brick arches between the girders abutting against the sloping sides of the girder, which would otherwise have been rectangular. Mr. Rankine believed that even this early tubular girder had been introduced from England.

Sir CHARLES PASLEY said, that though he had often differed in opinion with Mr. Stephenson, he considered him as the first who suggested a large oval tubular bridge across the Menai, all preceding contrivances being insignificant compared with the great idea of passing through the tube.

Sir D. BREWSTER replied, that a telescope the size of his thumb was as essentially a telescope as Lord Rosse's, and that if a tubular girder was constructed, it was of no consequence whether the train passed through it, or above it, or beneath it; and to prove that Mr. Stephenson himself regarded the construction of a thin tubular girder as identical in point of invention with a large one, he read an extract from Mr. Stephenson's speech, in which he distinctly made this statement.

The Astronomer Royal, Mr. AIRY, protested against all discussions of this kind, as calculated to disturb the harmony of the meeting.

Sir DAVID BREWSTER remarked, that he had not introduced the question between Mr. Fairbairn and Mr. Stephenson, his only object being to make known the claims of Dr. Guyot, as a foreigner, and to state that a Scotch engineer had anticipated the French *savant*. He added, that he did not group others with the Astronomer Royal in his protest, as such discussions had frequently taken place, and he thought that they might be carried on with good temper, and even to the satisfaction of the rival claimants as well as to the instruction of the members.

Dr. ROBINSON, the President of the Section, remarked, that as the subject had been introduced, he had no hesitation in stating, if the correspondence published by Mr. Fairbairn was authentic, which he believed it to be, that Mr. Stephenson had extended his claim too far, and that up to a late period he had no idea at all of any other than the tensile force upon the tube, and that he must come to a compressive force so ingeniously devised by Mr. Fairbairn, had not even entered his mind.*

Sir D. BREWSTER next gave a description of the tubular crane invented by Mr. Fairbairn, and constructed upon the same principle as the tubular girder bridge, for which he took out a patent in 1846. This crane, which greatly overhangs the pillar on which it rests, is made entirely of wrought iron, the inner or under side being cellular from the point of the jib to the toe, and the outer side being chain-rivetted to resist tension. The whole crane moves round on the toe, and there are working rollers near the ground line as guides. Cranes constructed on this ingenious principle are now being erected by the Admiralty at the government yards of Keyham, &c.

12. Professor C. P. SMYTH made his communications on the subject of a telescopic light for rifles. Instead of the eye having to look at three points, viz.—the niche at the eye, the niche at the extremity of the barrel, and the object to be hit, there were but too in his rifle, the cross-wires in the telescope, and the object. This made the aim a far easier matter.

Mr. USHER gave a notice of his steam plough.

An evening conversazione, not so crowded as the first, finished the (properly speaking) last day; but the Sections A and C thought it expedient to have a meeting on the Wednesday.

WEDNESDAY.

SECTION A.—(*Mathematical and Physical Science.*)

1. Professor Smyth, on cometary physics.
2. Sir D. Brewster, notice of the powerful magnets made by the process of M. Elias and M. Logeman opticians, Haerlem.
3. Sir D. Brewster, on the optical properties of cyanuret of magnesia and platina.
4. Sir D. Brewster, on a new membrane investing the crystalline lens.
5. Sir D. Brewster, on some phenomena of the polarization of the atmosphere.
6. M. Claudet, on the dynactinometer.
7. Professor Stevelly, attempt to explain the occasional distinct vision of revolving coloured sectors.
8. Professor G. G. Stokes, on the mode of disappearance of Newton's rings in passing the angle of total internal reflection.
9. Professor Hennessy, on the distribution of shooting-stars in the interplanetary spaces.
10. Mr. J. A. Broun, on electrical figures of dust on plate-glass.
11. Mr. Beswick, to exhibit a magnetic chart.

(1.) Professor SMYTH treated of the physical nature of comets. He had connected the facts of observers, and had endeavoured to arrange them for ocular inspection in the following table of cometary axioms:—

1. A comet consists of a nucleus, and one or more gaseous envelopes.
2. The nucleus, if solid material, is exceedingly small.
3. The nucleus eccentrically situated in the gaseous body.
4. Comets of the longest periods have the largest bodies.
5. The more eccentric the orbit, the more eccentric the body of a comet.
6. A comet rotates on its shorter nucleoid axis in the same time that it takes to revolve round the sun.
7. This axis is not always at right angles to the plane of the orbit.
8. There is also a quicker rotation round the longer axis.
9. A comet shines by reflected light, and shows a sensible phase.
10. In proportion to the eccentricity of the orbit, a comet increases in density, and decreases in size, in approaching the perihelion, and *vice versâ*.
11. The longer axis of a comet is straight at perihelion and aphelion; but between these points, is concave towards the latter: the curvature being inversely as the eccentricity of the orbit.
12. (Sir J. Herschel's). The component molecules of a comet are only held together by their mutual gravitation, each constituting almost a separate projectile, and describing it own parabola round the sun.

Professor Smyth directed attention particularly to axioms 9 and 10, as perhaps most important; and in regard to which, as he thinks, his results are decidedly new. The grounds upon which these results are based were described and illustrated by diagrams.

2. Sir D. BREWSTER exhibited two magnets made by the process of MM. Elias and Logeman, the larger of the two weighing 12½lbs., and supporting 150lbs. under careful manipulation, and after polishing the ends with an emery stick. A magnet, similar to the smaller one, weighing 1lb. and supporting 28½lbs., and from the same makers, was shown by Mr. Faraday this last season at the Royal Institution, and was noticed in the *Literary Gazette*. The process of M. Elias, Sir D. Brewster said, was quite different from the ordinary one, the magnet being moved along a helix of copper wire. The qualities of the Haerlem magnets were stated to be cheapness, remarkable constancy, and powerful, greatly beyond (nearly twice as powerful as) any made.

Dr. SCORESBY bore testimony to the superiority of these magnets over any others he had seen from the hands of regular makers, but it was a mistake to say that they were superior to any ever produced. He compared one of his own with the smaller one, and the proportions of power were not very different. The larger one he pronounced to be a most splendid magnet. The goodness of a magnet, however, he said, did not depend upon the mode of magnetizing, but on the quality of the steel. He had not produced anything like it except in a larger mass, but he had no doubt he could produce by his process a magnet of equal quality, and he would try. Doubtless, therefore, more anon—at Ipswich.

3. The remarkable character of the cyanuret of magnesia and platina, noticed by Sir D. Brewster, was its property of reflecting light from its outer surfaces.

4. The crystalline lens of an ox killed on the 12th December was taken out on the 13th, and immersed in water. The water as usual was soon absorbed, and the membrane separated, but shortly after a little bag rose up, having inequalities on its surface, and upon examination it was found that this new membrane had a higher refractive power than the outer one.

5. This, like the two former, was a brief notice; Sir D. Brewster's object was to explain the general phenomena by refraction—a principle, as we understood him to say, not yet applied to the polarization of the atmosphere.

6. The Dynactinometer is an ingenious instrument, invented by Mr. Claudet, for measuring the distances between the photogenic and visual foci of a lens. No lens can be made for practical photography with the two foci coincident; or if they be so at one position, they become separated by altering the distance; and when the foci are most separated, the lens is most active. The dynactinometer affords the means of comparing the powers at different distances of the foci; in short, of measuring the "actinic" power of lenses. This instrument, then, combined with his photographometer for testing the sensitiveness of the plates, must render Mr. Claudet's photographic apparatus most efficient.

7. The point brought forward by Professor STEVELLY was the explanation why, on a rapidly revolving disc, divisionally coloured—for instance, blue and yellow, the yellow is separated from the blue, and seen singly by a sudden turning of the head. It is due, he says, to the arrangement of the optic nerves, a certain portion of the retina nearest to the nose not being in action in ordinary vision, but still exceedingly sensitive. By a sudden turn of the head, this portion of the retina, fresh and delicately alive to sensation, is brought into play, and the yellow appears to the improved visional power; and herein is evidenced another wise provision for the protection of the animal against any suddenness of action.

8. The popular point of this brief communication was, that by looking through a pin-hole, or better still, a needle-hole, indistinctness is removed, and Newton's rings are beautifully seen.

9. Professor HENNESSY argued, from the fact of no aërolites having been found in the early geological periods, that the mean distance of the earth from the sun was lessening, and that therefore the heat of those inconceivably great periods could not have been derived fromthe sun.

10. These beautiful figures cannot be easily described without copies of the drawings shown by Mr. Broun. They consist of lines of fine tracery, sometimes continuous, and sometimes formed of series of small points. Mr. Broun has never seen them on other than plate-glass; and he attributes their formation to the different electric states of particles of dust floating in the atmosphere during dry weather, and the plate-glass; or rather the points in the fine striæ produced in polishing the glass.

11. Mr. BESWICK'S chart exhibited the lines of magnetic declination for 1840, computed by a new method based upon the principles of Gauss, and was said to present a striking similarity with Colonel Sabine's maps of observed declination for the same year. By his method Mr. Beswick says may be computed a chart for any period, past or future.

Previously to adjournment to Ipswich, Professor J. D. FORBES intreated the indulgence of the Section for any imperfection in his conduct as president; if he had spoken hastily, or given any offence, it was unintentional, and he apologised. He had endeavoured to distribute equal justice, and to

* See the *North British Review* for August, 1850, p. 428.

uphold the interests of all. By the applause with which it was received, any cause for the apology was pronounced "not proven." Professor Forbes' conduct throughout (notwithstanding evident suffering under ill-health) was exemplary, both in the chair and under Professor Smyth's attack.

In Section C, which met for a short time to-day, Mr. Maclaren exhibited two beautiful models of Arthur's Seat and the Salisbury Crags, one made by himself, and the other by Mr. Wright, and showing their geological structure. The whole of the ground exhibited in the models consists of immense masses of trap injected through super-incumbent strata of various kinds. The top of Arthur's Seat appears to have been the crater of a volcano, and is surrounded by a fragmentary mass, thrown up by successive eruptions, and afterwards consolidated by the infiltration of lime, in which state it is known as trap-tuff. At the bottom of this fragmentary mass there is a mass of basalt, which appears to have blocked up the orifice and stopped the farther eruption of the volcano.

There were but few attendants on this occasion, and nothing else was done except conversationally upon various fossil and other geological specimens, which were exhibited on the platform. Connected with these pursuits, we should notice, that on Friday morning Mr. Robert Chambers conducted a party on a pleasant ramble to examine the striated rocks about the Corstorphine Hills and their vicinity. On Saturday there were excursions to Bell Rock, in, as we understand, a well-provisioned steamer; another to New Berwick per rail, whence about 150 members of both sexes divided into sections to visit the Bass, Tantallon old Castle, and the sweet village of Dirleton, with its ruined ancient mansion. At the Bass the solan geese were grievously disturbed, and some of them, ornithologically knocked on the head, with their young ones murdered on their nests, brought off as specimens. A third excursion was projected for the Pentland hills, but unluckily it was forgotten to order conveyances, and so the intended explorers, after much delay, thought it best to proceed to Arthur's Seat and the Salisbury Crags adjacent, and examine the geology so well described by Mr. Maclaren.

Mr. COWAN, the M.P. for Edinburgh, and Professor Symes fêted large bodies of the visitors; and the whole ample hospitalities and kind attentions of the place were gratefully acknowledged at the concluding general meeting, where, "assisted" by an apparition of the Nepaulese Ambassador and his suite, the usual complimentary thanks were voted to all the authorities and officials who had done so much to render this, as it was, a harmonious and happy meeting.

Ordnance Survey of Scotland.

Sir R. I. MURCHISON proposed that a recommendation from the British Association for the Advancement of Science be made to the government, to the effect that the map of Scotland long ago projected should be prosecuted with the utmost vigour. He adverted, with pleasure, to the fact that the recommendation from the Association when last met in Edinburgh, sixteen years ago, had had the effect of accelerating a triangulation of the country, the great geodesic stations and primary angles of which, it is believed, are now nearly determined.

At the same time, the British Association exceedingly regrets that it has not been thought expedient to employ a larger force on these operations, which might, during the last sixteen years, have given to the public a large portion, if not the whole, of a map of Scotland; in the absence of which no geological map, nor any accurate engineering process can be accomplished. Whilst the members of the British Association consider it necessary to bring the present state of the Ordnance Survey of Scotland under the consideration of her Majesty's government, they take this opportunity of expressing the satisfaction with which they have seen the progress that has been made in the nautical survey of the coasts of Scotland, undertaken since the last meeting at Edinburgh by order of the Lords of the Admiralty, under the direction of the present Naval Hydrographer, Rear Admiral Sir Francis Beaufort. At the same time it is to be borne in mind, that the true determination of the position of the land ought to have preceded the nautical survey. There is good reason, indeed, to believe, that if the present surveying force be not augmented, the map of Scotland will not be completed in less than half a century, whilst it is a fact that the survey and mapping of Ireland were completed in twenty-five years.

ARCHÆOLOGY.

THE ARCHÆOLOGICAL ASSOCIATION.

(From our own Correspondent.)

THE Archæological Association met, as announced, at Manchester, on Monday, to hold its seventh Congress, Mr. James Heywood, M.P., president. The first preliminary meeting took place in the Mayor's Parlour, Town Hall, where a rough and alterable programme of proceedings was chalked out. The president addressed the assembled company in an appropriate manner, and they adjourned to an examination of the Cathedral, upon the Architecture and History of which Mr. Arthur Ashpitel afterwards addressed a considerable auditory in an able illustration. The chief point elicited seemed to be the insecure nature of the Tower, and the necessity for immediately providing for its repairs.

At the evening meeting in the Mechanics' Institute about sixty persons, including a few ladies, only were present, so that we cannot say Manchester has turned out in numbers to join the meeting. It is, perhaps, too much a place of *busy business* to admit of much attention to or sympathy for antiquarian pursuits. Mr. Pettigrew, the treasurer, though we are sorry to say a good deal indisposed, delivered an elaborate address on the study of Archæology, and the particular objects of the Association, which was much applauded.

Mr. Planché read the next paper on the list, on the Stanley Crest, *vulgo*, "the Bird and Baby," and endeavoured to trace the adoption of the Eagle and Infant in swaddling clothes, apart from the well-known legend, to the family of Lathom, an heiress of which Sir Thomas Stanley married. To the names of *Orme* and *Ailward* he attached some earlier significance, as connecting the ideas of an Elm Tree and an Eagle and Elm Tree; but the whole genealogy and origin of the Crest were still attended with much obscurity.

The Rev. J. C. Bruce read the third and last paper, on the structure of Norman castles in England; and took a detailed view of the modes in which they were built, attacked, and defended.

On Tuesday morning a train bore some forty or fifty members, soon after 9 o'clock, by rail to Blackburn, through the region of tall modern chimneys and everlasting smoke, instead of cloud-capt towers, to which indeed they exhibit very strange analogies. It is said that Manchester and ten miles round, contain a greater population than London, which numbers two millions and a half. They are, generally speaking, rather coarse exemplars of the human race, and do not look as if they had Lancashire witches for their mothers. Much of the railway was unfinished, the time ill kept, and the tunnels long and dark as mediæval annals.

Whalley Abbey, the first scene visited, is beautifully situated, and an extensive and interesting ruin. Mr. Whittaker, the vicar, and son of the historian, kindly and courteously attended the party, above fifty in number, and explained the various features of the walls, cloisters, tombs, &c. The yet more ancient church was also inspected, the three remains of Saxon or Danish crosses in the churchyard, the oak wood carvings saved from the immense mass in the conventual building, and other antiquities. In this church one of the carvings under the seats represents a blacksmith with his forge, bellows, and all his tools, shoeing a goose with a large hammer. The inscription in old black letter runs, *Whoso melles* (meddles) *him of what another dos* (does) *Let him come here and shoe the Gos* (goose). No bad piece of advice. Carriages provided, the party went, in showery weather and bad roads, to Mytton church, and thence to Ribchester, where they are digging holes by the river side, and finding abundance of Roman pottery. It must have been a large station, and the fine river and country around made it a pleasant one. There is little else worthy of notice. By Preston to Lancaster the sojourners got in time for the evening meeting, which was much better attended than Manchester, and the cases taken by the local committee far more congenial to archæological tastes and requirements. The papers read in the Music Hall were by Mr. Planché, on the Badges of the House of Lancaster, Mr. Thomas Wright on the History of Witchcraft, and Mr. G. Godwin on Barbicans. The excursion appointed for this day (Wednesday) includes Heysham and old tombstones, Piel Castle, and Furness Abbey. In the evening, we expect papers by Dr. James Johnson on the History of Ancient Lancaster, and Mr. J. Adey Repton on Ancient Timber Houses.

Manchester, Thursday Evening, 22nd August.

To give an idea of the peregrinations of the Archæological Association, reserving what we may have to say of its regular Antiquarian proceedings, I drop these few lines to state that the party of members returned from Lancaster by express train at 6 o'clock, having passed at the latter place two as agreeable days as could be described. The attentions of the Lancastrians were of the most gratifying kind, every person seeming to have only one object—that of kindly informing and liberally entertaining the erratic visitors. The arrangements were good, and everything ran smoothly. I have stated the first night's doings in my former communication. Yesterday an excursion across Morecombe Bay took us to Piel Castle, and the fine ruins of Furness Abbey. Here Mr. Sharpe read a very interesting lecture on Architecture, and especially of so much of the art as was most applicable to this Cistercian magnificent building. He afterwards went over it with the company, and pointed out the data on which he had founded his observations. A lunch at the hotel, and return to Lancaster, were only remarkable for the beautiful weather and a rare atmosphere, which enabled us to see the Isle of Man, Penmaenmaur among the Welsh mountains, and the Westmoreland and Cumberland ranges, in every point of form which a glorious sunset could display. The ladies of the party, some twenty in number, appeared greatly to enjoy the scenes. This morning a trip up the charming valley of the Lune took us to the hospitalities of Mr. Pudsey Dawson, of Hornby Castle, who proved to us what the reception of a "fine old English gentleman" had been, and still could be. Mounds, Roman remains, mediæval curiosities, and other relics of ancient times, were inspected, and from one train we were transferred to another, and run on to Manchester in about two hours. I had forgot to say that a handsome breakfast was given at Lancaster to nearly a hundred, at the close of which hearty thanks were returned to the inhabitants and gentlemen of the neighbourhood. Mr. Heywood and Mr. Wilson Patten, the two county members, spoke cordially to the sentiments of the meeting.

The evening meeting here is going on now, and is no improvement upon the Manchester of Monday and Tuesday morning. The president, Mr. Heywood, has exerted himself much, and Mr. Cregan and the other local officials have done all in their power to aid his efforts; but the truth is, the Cotton Lords have not responded, and we find that their capital was a capital mistake for literature and archæology. Neither have the clergy come

forward, though almost pledged to the Association. Well, we must leave the men of the present day, who can have few sympathies with men who are investigating the past. In future *Gazettes* we will give a sufficient account of the whole affair.

FOREIGN CORRESPONDENCE.

FRANCE.

Paris, Thursday.

DEATH has stricken down Balzac, one of the great men of the republic of letters. He was in the very prime of life—only 51 years of age, and his brain was full of great works which he had spent the last two or three years in studying; but though thus untimely snatched away, he has by "Père Goriot," "Eugenie Grandet," the "Peau de Chagrin," the "Parens Pauvres," the "Physiologie du Mariage," and innumerable other works, gained a name which will be renowned for centuries to come. I place him in the very foremost rank of the geniuses of our age, and far, far above the modern romancers of France—the Sues, the Hugos, the Dumas, the Souliés, the Sandeaus, and even than George Sand herself. He was, in very truth, a glorious fellow. He possessed the sublime secret of probing the human heart to its profoundest depths, and of laying bare with a masterly hand all its mysteries and all its passions. He possessed, too, the divine gift of the poet,—the creation of character: creations strikingly original and yet wonderfully true. But Victor Hugo—a competent judge assuredly—in the speech he delivered yesterday over his grave in the cemetery of Père la Chaise, before leaving him "alone in his glory," describes his vast and varied talent with far greater truth and eloquence (though in somewhat Frenchified strain) than I can pretend to:—"M. de Balzac was one of the first among the greatest, one of the highest among the best. This is not the place to say all that is to be said of this splendid and sovereign intelligence. All his works form only one work—a work living, luminous, profound, in which we see all our contemporary civilisation go and come, move and act, in a way in which the terrible seems united with the real; a marvellous work which the author has entitled a comedy, but which he might have called a history—which takes all forms and all styles, which surpasses Tacitus, and equals Suetonius, which goes beyond Beaumarchais and up to Rabelais; a work which is one of observation and of imagination;—which is full of the true, the intimate, the common, the trivial, the material, and which at moments, through all the realities brusquely and roughly torn aside, allows all at once to be seen the most sombre and most tragic ideal. Whether he knew it or not, whether he desired it or not, whether he would consent to it or not, the author of this immense and strange work is of the great race of revolutionary writers. Balzac goes straight to the object. He seizes modern society, he wrests something from all—from some their illusions, from others hope, from such a one a cry, from another a mask. He probes vice, he dissects passion; he digs and sounds man, the mind, the heart, the entrails, the brain, the abyss which each man has in himself; and by right of his free and vigorous nature, by a privilege of the men of lofty intelligences of our time, who, having seen revolutions close at hand, perceive the end of humanity better, and understand Providence better, Balzac frees himself, smiling and serene, from those redoubtable studies which made Molière melancholy and Rousseau misanthropic."

Honoré Balzac (he used the aristocratic *de*, but I believe of his own private authority only) was originally a journeyman printer at Tours, his native place. Something, however, within, told him that his destiny was to write books, not print them; and he wrote. His earlier works obtained a fair measure of success, but it was not until after many years' apprenticeship, either anonymously or under assumed cognomens, that he ventured to communicate his name to the public. And no sooner was the name given than it became popular—and in a little while famous—famous not in France alone, but all over Europe. His success was almost as brilliant as that of Walter Scott himself; and his different works, being more laboured, are of more equal merit than those of the *Laird of Abbotsford*. What Scott has done for the past, Balzac may be said to have done for the present; and their names, I imagine, will be equally esteemed by posterity. In addition to his romances, Balzac wrote some theatrical pieces, and for a while edited and contributed a good deal to the *Revue Parisienne*. But it is only in the romances that you find unquestionable evidence of his great genius. His last work was the *Parens Pauvres*—a powerful and almost terrible description of Parisian society—a complete, almost revolting, dissection of that brilliant *monde* which is so fair to the eye, and so agreeable to mix with, and yet which is all rottenness and vice within. Since the revolution cast a fell blight on literature Balzac published nothing, but was engaged in visiting the battle-fields of Germany and Russia, and in piling up intellectual materials, if I may so say, for a series of volumes, to be entitled *Scènes de la Vie Militaire*. He leaves behind several MS. works, partially or wholly completed. His design was to make all his romances form one great work, under the title of the *Comedie Humaine*,"—the whole being a minute dissection of the different classes of French society. Only a little while before his death, he stated that in what he had done, he had but half accomplished his task. His life was that of almost every other literary man—full of emotion, of alternate good and bad fortune; but, except a history of his different works be given, it presents little material for the biographer. Next to his great celebrity, the most remarkable feature in his career is a strong passion which he formed for a Russian countess, and which, after years of patient suffering, he had the satisfaction of having rewarded by the gift of the lady's hand. Shortly after his marriage—which took place some two years ago—he was attacked with a disease of the heart, and that carried him off. He and his wife had only been a few months in Paris when this sad event took place.

Balzac foolishly allowed one circumstance to embitter his literary career, and that was, his non-election to a seat among the *soi-disant* "immortal" forty who form the Académie Française. It was strange that such a genius should have aspired so ardently after such an insignificant distinction; but so it was, and being so, it was no wonder that he considered his rejection on the two or three occasions on which he presented himself, as a scandalous injustice and a cruel mortification. But he ought to have reflected that the Académie now is a *political* and not a literary institution—that its uniform is the last bauble for which the battered statesman or political adventurer strives—that the majority of its members are pitiable mediocrities. And so reflecting, he would have learned, like Béranger, to despise the paltry dignity of Academician as unworthy of literary genius.

The French, to their honour be it said, never allow—as the English often do—one of their great men to die unhonoured. When Balzac's death was announced, the expression of sorrow was universal and sincere; and his funeral yesterday was attended by the Minister of the Interior; by several representatives; by Rothschild and other great bankers and merchants; by a veritable legion of the most distinguished of our literary men, artists, actors, musicians, sculptors—and, what was most honourable of all, by a vast number of working men, in their working-day *blouses*.

It is definitively settled that the exhibition of the works of living artists shall commence on the 15th of December next, and be held in the Palais National. Foreigners will be allowed to exhibit on exactly the same conditions as natives—that is, provided their works be declared of sufficient merit by a jury nominated by the artists themselves. Some English make a point of exhibiting; but they are never so numerous as they ought to be—never so numerous as the Germans. Your readers really would do well not to disregard this exhibition. It gives them a better chance of becoming known than they can have in England; and to those who have already gained distinction, it affords an opportunity of transforming mere English into European celebrity.

The newly-established censorship on theatrical performances has come into full operation, and, as was to be expected, has already given immense dissatisfaction to theatrical managements and authors. Some of the former have flatly refused to comply with several of the requirements of the censors—such as giving full lists of their *repertoires*, that is, of all the pieces they have ever played,—and as to having one or more full dress rehearsals of every piece, from the *grandiose* five act-er down to the most trumpery vaudeville. As to the authors, they fight most manfully, and inch by inch, against the suppression or change of a single passage in their productions. One of them, even, by way of bringing things to a climax, swore the other day that he would sooner meet every one of the censors in a duel than submit to have his play mutilated. And if all that is said be true, it really appears that the censors are going too far. For example, they are said to have threatened the Théâtre Français to have Molière himself revised and moralised, and even to prevent the representation of one or two of his comedies. But, on the other hand, the censors have already done some good, by boldly suppressing one or two really scandalous pieces, and weeding others of disgusting pruriency. English folks unacquainted with French have no idea of the enormous lengths to which French dramatists have lately gone. For instance, one of the suppressed pieces at the Palais Royal was taken from the *Sopha* of Crebillon fils, and the *least indecent* thing in it was a young woman lying flat on her back on a heap of straw, and talking *amour*, and very hot *amour* too, to a young man!

FINE ARTS.

SALE OF THE LATE KING OF HOLLAND'S COLLECTION OF PAINTINGS, DRAWINGS, AND SCULPTURE.

THE collection at the Hague has long been a great sight for the travelling *virtuosi* of Holland and Belgium. It was principally formed by William II., who was a very liberal patron of the arts, and well known to the first-class picture dealers of London, and highly esteemed Mr. Farrer, who assisted in making the collection. It is no secret that his late Majesty died insolvent; and the laws of Holland being less respectful of persons than those of other countries, his fine pictures yield to the demands of honour and justice. Amongst these, report says, the Emperor of Russia's liens upon the most valuable works are considerable. A large part of the collection was brought from the palace at Brussels to the present palace, which was built by the late king, though it is not at all well constructed for pictures, the Dutch and Flemish works being distributed over several small rooms; so that these rare and choicest works are but indifferently seen. The Gothic Hall, a lofty room with a fine carved roof, contains the Italian and Spanish works. These are not so celebrated in their class as the Dutch school. In a long narrow gallery are placed the drawings, many of which were bought from the executors of Sir T. Lawrence, after being collected by him at enormous expense and with the greatest zeal and fine taste, for the sake chiefly that the nation, and the school of the Academy, should have these unrivalled studies of Leonardo, Raffaelle, Michael Angelo, and other of the greatest masters. By a most uncommon chance, the opportunity of redeeming the governmental blunder now occurs; but we fear that again it is not seized, for while every other European state is represented at the sale by an agent, England appears only through the enterprise of the various dealers of London. Six rooms are filled with works

of the moderns, of which the greater part are by Dutch and Flemish artists, some French, and a fine work by Wilkie—"The Family of the Distiller." The most remarkable pictures of the gallery are the Leonardo's, "Colombine" and "Leda;" the Luinis, the Andrea del Sarto, "Vierge de Pade;" the Rembrandt portraits, the Hobbima "Watermill," the Rubenses, the Vandykes. The Italian collection, as a whole, is not first rate, and the Claudes are of inferior quality.

The sale includes 352 lots of pictures, and 368 of statues, busts, and drawings. It began on the 12th, and was expected to end on Friday last. It is held in the Gothic Hall, which has been fitted up for the purpose. The interest in the royal sale is very great, and catalogues sell at a high price. The Marquis of Hertford, and other English amateurs, were present, and the "conservateurs" of Brussels, Paris, Berlin, Dresden, Munich, and St. Petersburg. The sale seems to have received a damper rather from the number of pictures bought in by M. Rose. The prices are not high for first-class pictures. We subjoin some of the principal lots, and the prices fetched in English money, in round numbers.

No. 82. Van der Helst.—A fine gallery picture. A family party in a garden, with dogs, falcon, &c. —M. Bruni, 993*l.* 14s.

83. Same.—The painter represented in his studio, taking the likeness of his brother. Two other artists sit at a table. One of his finest works.—68*l.* 14s.

84. Rembrandt.—Portraits of Jean Pellicorne and his son.

85. Same.—Portraits of Madame Pellicorne and her daughter. Very beautiful examples. Both lots to the Marquis of Hertford, for 2516*l.*

86. Same.—Portrait of a Rabbi in fine black costume, bordered with ermine, holding in his left hand a letter with superscription, and date 1631. An admirable picture.—M. Veymal, merchant, for 283*l.*

88. Same.—Portrait of a lady, wearing a broad hat and feather. Painted in vigorous style.—M. Leroy, for the Museum at Brussels, 583*l.*

93. J. and A. Both.—A very grand and beautiful Italian landscape, with figures, cascade, &c. One of their finest works.—M. Leroy, for the Museum at Brussels, 900*l.*

94. J. Ruysdael.—A very superb mountainous landscape, traversed by a broad stream, over which a bridge conducts to a road by the river-side, and a herdsman driving cattle and sheep is directing two cavaliers on their route. An extremely fine composition. The figures by Van de Velde.—M. Leroy, for the Brussels Museum, 1075*l.*

108. Albert Durer.—"St. Hubert." A small picture, representing the Patron Saint of Chasseurs kneeling before the mysterious stag. The whole is most elaborately finished. A white horse, from which the Saint has dismounted, is marvellously fine.—Rose, 316*l.*

111. Claude Lorraine.—A Seaport. A classic scene on the coast of Italy, adorned with architecture, vessels, and figures.—Rose, 711*l.*

141. Fra Bartolomeo.—"La Vierge au Palmier." M. Roos, 1166*l.*

153. Carlo Dolci.—"St. Luke." An exceedingly fine specimen of the master, 491*l.*

155. Guido.—"St. Joseph, the Virgin, and Infant Saviour." A splendid picture, 658*l.*

157. Guercino.—"The Martyrdom of St. Catherine."—M. Bruni, for the Emperor of Russia, 841*l.*

164. Bernardino Luini.—"The Holy Family." A most superb composition, beautifully preserved, 1291*l.*

170. Perugino.—"The Holy Family." A splendid round picture, in beautiful preservation. For the Louvre, 1958*l.*

173. Sebastian del Piombo.—"Christ at the Tomb." A fine gallery picture, 2333*l.*

176. Raffaelle.—"The Holy Family." A round picture. Supposed for the Royal Family of Holland, 1375*l.*

177. "Raphael Sanzio."—"Portrait de Salezar." It is very questionable indeed if this picture be by Raffaelle. M. Bruni, for the Emperor of Russia, 1333*l.*

181. Andrea del Sarto.—"La Vierge de Pade," considered to be his *chef-d'œuvre*. Almost all the continental courts, Russia, France, Prussia, Saxony, and Belgium, entered the lists with the Marquis of Hertford, and it was continued with great obstinacy by the Emperor's agent for full half an-hour. But it was finally knocked down to the Marquis at 2520*l.*

191. Leonardo da Vinci.—"La Colombine." A very splendid and precious picture. Contended for by France, Russia, Prussia, Belgium, &c., and many amateurs; but Russia prevailed.—3333*l.*

192. Leonardo da Vinci.—"Leda." A very splendid composition, and most beautifully preserved.—Believed to be for one of the Royal Family of Holland, 2041*l.*

No. 63. Rubens.—"Christ giving the Keys to St. Peter." A most splendid and highly-finished picture. For the Marquis of Hertford, 1500*l.*

65. Same.—"La Chasse au Sanglier." For one of the Royal Family, 1666*l.*

71 and 72. Vandyke.—Portraits of Philippe le Roy and Madame le Roy. For these two most magnificent portraits there was a long and determined competition for nearly an hour. After the many had dropped off, it was kept up on account of three or four royal galleries to 40,000 florins; the race then was between "the Emperor" and "the Marquis." The victory was declared at 5,300*l.* "for the Marquis of Hertford," which was followed by a general cheer.

Many of the fine drawings have passed into the hands of Messrs. Woodburn, from whom, if we remember rightly, they were originally bought by Sir T. Lawrence. Of these, and some to Messrs. Colnaghi,—

6. Raffaelle.—A study of an aged man, called "Raffaelle's Executor," a marvellously fine thing, fetched 266*l.*, to Mr. Woodburn.

8 to 15. Leonardo.—Eight pictures, studies for the Apostles in the celebrated "Last Supper," extremely fine. Sold for 666*l.*, to Weimar.

27. Raffaelle.—"Head of St. John." 55*l.*, to Mr. D. Colnaghi.

37. Raffaelle.—Portrait of his Sister, in black chalk. 63*l.*, to Mr. Woodburn.

It is very gratifying to find that our noble patron of the arts, the Marquis of Hertford, now possesses some of the gems of the collection—the Rembrandt portraits of the Pellicorne family, the Hobbima *chef d'œuvre*, the Rubens, and the Vandyke, a splendid addition to the already rich treasures of art in the galleries of our aristocracy, and a most worthy expenditure of noble wealth. The Wilkie, too, returns to us again in the hands of Mr. Grundy, of Liverpool, who gained it, after a fierce competition, for 841*l.* 13s. The marquis has bought to the sum of near 12,000*l.*; the Emperor of Russia to 60,000*l.* sterling. The product of one day's sale was, in round figures, 50,729*l.*

MUSIC.

REVIEWS OF NEW PUBLICATIONS.

THE accumulated music of the season, forming a perfect *mêlée* upon our table, now forces itself upon our attention, and pleads for notice in this the breathing time of performances. Here are grave church music, and books for chaunting and psalmody; glees, madrigals, German songs, pretty ballads, quadrilles, polkas, and Nepaulese waltzes; all merit a hearing, and to few can the epithet "trashy" be applied. Perhaps first in rank and importance come those published by Messrs. Cocks and Co.

Glees. Composed by G. W. Martin. Cocks and Co.

THESE are five, and all showing the experienced musician. The prize glee, "Is she not beautiful?" suffers from its length. All glees should be moderately long; "lengthened sweetness, long drawn out," may have a soporific tendency, and so have twenty-three pages of singing by the same voices. "Haste, ye soft gales," is more to our taste.

The Chaunter's Hand-Guide, containing the Psalms, Canticles, &c., pointed for Chaunting, with 373 Cathedral Chaunts. By Joseph Warren. Cocks and Co.

IN these times, when more and more attention is being paid to the older mode of performing the church service, and when all the congregation are expected to intone in company with the precentor, it is desirable that the method for chaunting should be as far as possible understood by all. In this book the music of the chaunt heads the page, and under it are the words of the service, the reciting words, or those to be said to one note, being divided from the remainder of the verse which is in italics: this arrangement will facilitate the practice for those whose ear is not sufficiently quick to catch the chaunt from the choir. Many of these chaunts are new and composed expressly for this work, which is really a desideratum to those who like to join in the music of the church.

Warren's Psalmody. In Parts. Nos. 1, 2, 3. Cocks and Co.

THIS is a very useful little work, and contains all the old respected psalm tunes in use in our churches and chapels, arranged in the four parts, with organ or piano-forte accompaniment. From its cheapness it will be quite a boon to many.

Madrigal.—"Busy, curious, thirsty fly." The words extemporized on seeing a fly drinking out of his glass. By W. Oldys. The music by G. W. Martin. Cocks and Co.

A CLEVER piece, simple, but formed according to the madrigal rules, and with its merry subject likely to be popular. Another, by the same composer and publishers, "As the stream that shineth bright," is equally pleasing, and moves on smoothly as a stream.

Songs without Words. Arranged for the Pianoforte. By Mary W. Holmes. Cocks and Co.

Nos. 1 and 2. These are not likely to drive the celebrated "lieder ohne vorte" out of favour, and the less so, because they are only a *rifacciamento* of well-known Scotch airs; they are, however, pretty enough, and will be acceptable for pupils.

Church Music. Services and Anthems, with Chants and Hymn Tunes. Composed by Jas. Tilleard. Novello.

Nos. 1, 2. The "Te Deum" is on the whole very like most others of its kind: the verse, "Vouchsafe, O Lord," is excellent. The subject has a graceful and expressive motive. In the "Jubilate," the opening is well composed, but there is not much originality in the music.

The Church Hymn-book. Parts 1 to 3. F. and J. Rivington, and Addison and Co.

THIS is a cheap and acceptable collection of Hymns with appropriate tunes—the music on one page, the hymn on the opposite.

The Church Musician. Nos. 1 to 3. Edwards and Hughes, D'Almaine and Co.

ANOTHER cheap musical periodical, coming out monthly, calculated to assist in the practice of chanting.

Anthem. "O Saviour of the World." Composed by the Rev. S. S. Greatheed, M.A. Novello.

IT is particularly gratifying to find the clergy directing their attention to sacred composition. Mr. Greatheed is evidently a student of the best style of church music, as the structure of his anthem shows.

The Language of Flowers. Song of the Alpine Storms. The Harp. Songs, composed by C. S. Hervé. With words by C. F. Whiting. Novello.

ALL pretty looking pieces of music, and pretty to sing; pretty little changes for sweet little voices.

Her Majesty's Theatre.—The season ends here to-night. A farewell night was given on Thursday, with *Lucia* for Mr. S. Reeves and Miss Hayes, the *Barbière* for Sontag, and *Ernani* for Parodi and Gardoni. To-night the new prima donna, Signora Fiorentini, is added to the attractions, and thus all the various celebrities attached to the establishment will appear, and make their final valedictory bows; and we think we may congratulate the courageous lessee upon having got through a season of unprecedented difficulty very respectably.

Royal Italian Opera, Covent Garden.—Grisi has been asserting her right to the rank and title of *the* prima donna during the past week, in the parts of *Norma* and *Desdemona*, both of which truly grand impersonations have before received our full meed of praise. Viardot had reminded us of her great comic powers in the little Spanish songs she sang at the concert at St. Martin's Hall, but we were hardly prepared for her singing *Adina* in the *Elisir d'Amore;* this, however, she ventured upon on Thursday, for the first time in England, and gave us a very amusing version of the village coquette. Madame Viardot's voice cannot be called a willing and obedient organ, but with her extraordinary skill, its less perfect parts are hidden and made subservient to art. The finesse of our new *Adina*, the *naïveté* and piquancy of her cadences, and numberless little bits of original treatment of the part, make it very fresh and interesting. But we must hurry on to speak of Ronconi's first appearance as *Dulcamara*, which, in a word, surpasses anything of its kind. He was so irresistibly comic and absurd, that it was often with the greatest difficulty Viardot could command her gravity, at the same time touching the music with consummate mastery. Mario as the *Nemorino*, and Tamburini as *Belcore*, made up such a cast of the fascinating little opera of Donizetti as has never been heard before. It would be superfluous to describe fully with what *verve* and glee everything went: such a fascinating and sparkling performance we have rarely if ever enjoyed. The season ends to-night, with the *Norma* and *Elisir*, and some farewell nights, at play-house prices, will be given next week.

Concert for the Italian Refugees.—Italy and the Italians must ever hold our warmest sympathies; the land and the race that claim for their own the great of poetry, of literature, of art. Rome, in its ancient grandeur, once mistress of the world, with its learned Popes and their priceless treasures of art and literature in the Vatican; Venice, with the mediæval splendour and romance of her kings and nobles; Naples, the charming cynosure of all that is picturesque and fascinating in nature; lovely Florence, with her picture palaces, and her Santa Maria Novella, made more sacred by the relics of Cimabue and Giotto; Milan, associated with Leonardo and his "Last Supper;" Parma, with the Corregio frescoes; Bologna, Sienna, and Pisa; indeed, scarce a place that is known at all that does not call up associations of intellectual greatness and exalted refinement. Italy is celebrated as the centre of art-emanation, and the birthplace of Painting and Music; but how melancholy its present condition! Her glory is departed; all the fine feeling and energy that once animated her children is decayed and sunk into the torpor of the *dolce far niente* of her unworthy people; and now she is but the temple where the monuments of the great Italians may be seen, and their spirits communed with, subject to the keeping and rule of a stranger's iron hand. Thoughts of this kind arose as we listened to the performance for the benefit of the refugee Italians at St. Martin's Hall, on Monday, when all the most renowned singers and players of the nation, with some French and some German, assembled with one accord to aid the benevolent cause. Grisi, Viardot, Castellan, De Meric, Mario, Tamburini, Coletti, Ronconi, Tamberlik, Tagliafico, Gardoni, Mei, Ciabatta, Baucarde, Massol, Herr Formes, Briccialdi the flautist, Piatti the violoncellist, Madame Goffrie pianist, and Sainton the violinist, — a goodly gathering of artistes, and worthy the object of the concert. The large Hall was crammed in every part, and the performers exerted themselves to gratify the audience and do honour to their country. Grisi and Mario gave the greatest interest and delight by their singing, which, for concert singing, has never been approached in our recollection; and we shall long remember Mario's wonderful display of feeling, power, and richness of voice; in its rare excellence it quite called to mind all the attributes of the old Italian character. Piatti is another example of the great capabilities of the Italian artistes whenever they give themselves to study, and Briccialdi equally so upon the flute. The greatest enthusiasm seemed to warm both audience and performers. Everything went well, except the gas, which very rudely went out in the middle of the performance, and disturbed the equilibrium of a few; but the recollection of the music is amongst our *pensées choisies.*

Mdlle. Lind at Liverpool.—The Liverpool Philharmonic Society, finding that the celebrated Lind would embark for her American journey from their town, determined to arrange two grand concerts, at which she should be the great attraction; the one on Friday evening, a miscellaneous selection of music, the other a performance of the Messiah, on Monday evening. A tolerable orchestra has been got together, chiefly from the local resources, some being professional, some amateur players, and a superior chorus, numbering altogether between two and three hundred, led by Mr. E. Thomas, and conducted by Benedict; the arrangements directed by Mr. W. Sudlow. The excitement attending the event has been something astonishing, even after the wild German serenades and continental *furors* that we have read of as attending the path of the charming vocalist. Eager crowds thronged all day and night, almost, round the door of the Adolphi Hotel, hoping to catch a glimpse of her; offerings of all kinds were made, from superb bouquets and magnificent grapes, to silver teakettles and candlesticks with an address, and a right royal art-homage was paid to her by the most crowded and enthusiastic audiences ever known at Liverpool. We are indebted to a private correspondent, one of Jenny Lind's oldest friends in England, for the following interesting particulars:

"Adelphi Hotel, Liverpool, Tuesday, 20th August.

"Jenny Lind arrived here on Thursday, at five o'clock, in company with her cousin, Mdlle. Ahmansson, who is always with her, and who goes also to America; Mr. Benedict, Sig. Belletti, and M. Vivier, for whom she gave her last concert at Baden-Baden, on the 6th. At seven the same evening, the rehearsal took place, though it is hardly correct to call it so, the hall being nearly full, and it holds 2,800. Mdlle. Lind told me it was beyond all question the finest and best adapted for such purposes of any she ever sang in. Say what you like about people being enthusiastic, it was beyond all bounds on Friday. She sang the 'Qui la voce,' from Puritani, exquisitely; and the scena from Der Freischutz, in German, as well as some of her Swedish melodies, which used to delight us so in London. The audience were quite carried away, and almost forgot the efforts of the singer in their ardent desire to hear her sweet voice again and again; she, however, expressed herself much gratified with her warm reception, but she keeps herself very private, declining all introductions and invitations.

"Before the rehearsal of the *Messiah*, on Saturday, I had the privilege of hearing her sing, 'I know that my Redeemer liveth,' in her room. Anything more religious and saintlike than her singing of this divine song, I cannot conceive: if angels do sing, they must sing like her; and if they don't, I never wish to hear them. She said, 'I would a thousand times sooner sing this than any other; all my heart is in it.' The *Messiah* was very well performed. Belletti was very successful; and, as I expected, Lind sang with sublime feeling, and created a wonderful effect. Between the acts, she heard that an address was to be presented to her, and appeared quite agitated at the thought of it. She received it in the ladies' green room, but could only say, two or three times, 'Thank you.' At the close of the performance, bouquets and flowers and wreaths fell from every quarter upon the platform, and frequently upon Lind herself, covering the ground. You would have thought all Chiswick was there. The national anthem was demanded, and Jenny Lind sang the leading part. She said to me afterwards that she wished to sing 'God save the Queen' the last thing in England.

"The excitement is immense. Crowds of men run beside the carriage, and wave their hats, shouting all the while, the church bells are ringing, and still denser crowds surround the places where she alights.

"August 22.

"I accompanied Mdlle. Lind to the Hospital, and saw her show the greatest sympathy for the poor inmates. She talked a good deal to two Swedish sailors. When the plate was presented to her, which was in one of the unoccupied wards, she seemed almost annoyed at it, and said, 'Oh, dear, you knew my wish; it should not have been so; no, no;' but she could not help admiring it, and dictated in the visitor's book that she had been so gratified, and would be glad to assist again in supporting the beautiful institution.

"I went on board the steamer to say farewell. The passage down the river was a most exciting scene; eight steamers, crowded with people, with bands playing, surrounded the vessel, the ships all firing cannon, and the shores lined with crowds of enthusiastic people. When we came away she cried bitterly, and kept saying, 'Thank you for coming to see me off. God bless you and protect you.' I saw her standing on the paddle-box with Benedict for a long time after we left the steamer, waving her handkerchief.

"No Queen—though Lind is as noble and generous, and a queen in art—could have been treated with greater signs of enthusiastic love and admiration. What a comfort it is to feel that, if the English people are somewhat insensible to the beauties of art, they never fail to respond gloriously to the rare good qualities and generous acts of a noble-hearted nature like that of Jenny Lind."

THE DRAMA.

Sadler's Wells Theatre.—We paid a visit to this well-conducted little theatre on the opening night of the season, and found the house thronged with an interesting and eager audience. The pit is mainly composed of respectable mechanics, with intelligent and thoughtful faces bent over the revered volume or the single play, come to listen, to learn, and to enjoy. The very "gods," charmed from their proverbial intempestive mirth and "terrible familiarity," are wrapt in buzzing expectation, hushed (as the curtain rises) to silence, broken only by judicious and discriminating applause. The boxes do not perhaps present a broadside of double barrelled *lorgnettes;* but in exchange for frivolous fashion of the *nil admirari* species, we see a few literary and dramatic celebrities, some faithful lovers of Shakspere, who have followed him into this "honourable exile," and younger enthusiastic students, not untempered by a due proportion of the finer sex, who think it no shame to "sit out a play." The marvellous tragedy of *Hamlet* is represented to-night. Mr. Phelps, if he does not quite *look* "Young Hamlet," (we have never seen his form and feature, as indicated by Shakspere, on the stage,) gives an earnest, refined, highly intellectual reading of the part. In the play scene, the involuntary sliding across the scene from the lap of *Ophelia* to the feet of the *King*, as the play proceeds; the bitter flashes of sarcasm, the nervous twitching of the fan, till he flouts the *King*, exclaiming, "He

poisons him in the garden, for his estate," with the terrible convulsive burst of over-wrought elation when "the *King* rises," quailing with guilt, carried the audience by storm. In the colloquy with his mother, the cold avenging dignity, as of a minister of fate, tempered by a heart that "has not lost its nature;" the awful pause on the apparition of the *Ghost* "to whet his almost blunted purpose;" the rooted stare of amazement at the words, "Do you see nothing there?" proved in the actor great power in executing a bold and vigorous conception. In the quieter scenes, where the dreamy and spiritual part of Hamlet's nature takes refuge in excess of meditation from the dread responsibilities of his mission, such as in the churchyard scene, in the various conversations with *Horatio*, and in the "advice to the players," the chastened and severe repose, relieved by the playful sallies of a subtle intellect, is rendered with admirable truth. In the scene of "seeming harshness" to *Ophelia*, in the third act, we desired a little more of the "profound artifice of love;" but as there are as many readings as readers of this scene, it would be hyper-criticism to insist on this or that interpretation. Miss Glyn appeared to us scarcely "possessed" with the *Queen*. There was a lack of strength, and, as it were, a search for "points." *Ophelia* was undertaken by a Miss E. Travers, a new-comer from the provinces, in a good conventional style, not unintelligent nor unpleasing, but somewhat deficient in grace and tenderness. *Laertes* was also entrusted to a new "importation," a Mr. Waller from Dublin, who seems to have found his ideal in Mr. G. Brooke, all whose vices and vulgarities of style he copies with painful success. Mr. H. Mellon is far too whining and lugubrious a ghost for the "royal Dane." Mr. F. Younge, (as the bills state, from Glasgow) deserves a word of praise for genuine and unforced humour, quite free from "gag" and buffoonery, in the *First Gravedigger*. The *Horatio* was very creditable, and the veteran George Bennett, as the *King*, lent weight to the cast. The general appointments are in all respects worthy of the present high reputation of Sadler's Wells. All who remember this theatre in the "good old days" of blood and thunder monstrosities, and "real water" melodramas, will be ready to award the palm to a manager who, by a conscientious adherence to a noble purpose, has effected so complete a revolution in its "traditions," as to make it the resort of as educated and judicious an audience as can be found in London, a real home of the Shaksperian drama, a valuable school for actors, a pure and wholesome recreation to the self-improving classes. May not Mr. Phelps rank among the "unacknowledged legislators" of our time?

On Thursday, Mr. Leigh Hunt's play of the *Legend of Florence*, originally produced at Covent Garden, under the management of Madame Vestris, in 1840, was revived. The part of *Agolanti*, on the first production of the piece, performed by Mr. Moore,—a new actor—is now played with great care and effect by Mr. Phelps. This is one of those mixed characters so difficult to render in a consistent and intelligible manner. The salient points were judiciously seized on by Mr. Phelps; but an air of general gloom is wanting, to give a consistency and ideality to the part, in which he appeared to us to be deficient. Miss Glyn played Mrs. Kean's part of the heroine, but was so elaborate in her meekness as almost to justify the husband's fretfulness at it. *Ginevra* is not one of those parts in which this lady is most at home, but no want of study or expression can be laid to her charge. A Mr. Waller,—new to the London stage—was the *Rondinelli*, and showed great earnestness and feeling; but if he wishes to maintain the position he has gained by a favourable *début*, he will find it necessary to discard a habit of imitating the peculiarities of a bad school of acting. The play is very well got up, and produced, we think, in its general effect, even a deeper impression upon the audience than on its first production.

Strand Theatre.—Since our last notice of the performances here, two novelties have been produced;—one, a farce in one act, by Mr. Palgrave Simpson, called *Without Encumbrances*, in which the character of a simple usher who, on his way to take a situation under the express stipulation that he is "without encumbrances," is induced to assume the responsibilities of a husband and father, is extremely well drawn by the author, and acted with complete individuality by Mr. Compton;—the other, a two-act drama, by Mr. Shirley Brookes. This piece, which will certainly not lower the reputation of the author of one of our cleverest modern dramas—*The Creole*—is somewhat improbable in its construction, but presents both comic and serious situations of considerable interest. The story is founded upon the substitution of a gipsy girl as the heiress of a heartless man of fortune, by whom she is sought out and recognised in revenge upon a nephew, discarded on account of his marriage with a young lady who turns out eventually to be the heiress for whom the gipsy is substituted. The plot is carried on by the above mentioned characters, with the addition of a rascally lawyer, and a prig of a butler, original, well sketched, and well acted by Compton, as is the part of the heartless uncle by Mr. Farren, who in point of dress, expression, and action, is all that can be desired, and whose deficiency in one respect it is painful to be compelled to notice. Mrs. Stirling's performance of the *Gipsy*, whose *nom de guerre*, *The Daughter of the Stars*, gives the name to the drama, is another proof of the rapid strides in her art of late made by this lady. The contrast between the violent and characteristic action and rude way of speaking in first Act, and the subdued, but yet impulsive manner in the second, give variety and force to her delineation, while genuine feeling renders effective the more pathetic features of the character. We must not omit to notice the judicious manner in which Mrs. Leigh Murray plays an up-hill character, nor the skill with which Mr. G. Cooke represents the scoundrel lawyer, upon whose machinations the plot of the drama mainly turns.

Surrey Theatre.—A drama, called *Tricks and Trials*, has been produced here, attended with the success due to a piece so well calculated to amuse the audience before which it has been produced. It has more than usual of actual life in it, and, if not strictly humorous, is full of broad and telling fun, and apt allusions to the features of the present day. It is well got up, acted with a good deal of spirit, and its production deserves to be chronicled, if only on account of its being, we believe, the first drama in which the use of chloroform is called in to aid in the development of a dramatic plot.

Theatre Royal, Southampton.—Mr. George Owen, who has for some time been making a prosperous tour of the provincial theatres as a tragic actor of the first class, has recently opened the Southampton theatre, as manager, with much *eclat*. Our elder dramatic contemporaries may remember his mother as a young and beautiful *débutante* at Drury-Lane, whence she resigned her maiden name of Beaumont to marry Mr. Owen, of the India House. The gentleman now pursuing his high career is his son; and we see everywhere in the country press golden opinions expressed of his qualifications and eminent talents for the stage. *Hamlet*, *Richelieu*, *Richard II.*, and the leading parts in tragedy, have been performed by him, and greatly admired and applauded. At Southampton, Mrs. Nisbett, Miss Mordaunt, and Mr. Mordaunt have been his stars, but his own acting appears to have rendered other attractions less needed than is usual in similar cases. The principal newspapers of the north and west speak most favourably of his person, countenance, voice, and expression; and add, that his style is in general finely chastened, so as not to outstep the modesty of Nature—a rare quality to be found in youthful aspirants to dramatic fame. Should London recover more of its theatrical spirit, we presume we shall, ere long, have some opportunity of judging Mr. Owen's powers for ourselves.

ORIGINAL POETRY.

THE MUSE'S WORKSHOP,

ALTERED FROM THE ITALIAN OF LEOPARDI.

In youth, I had my trade to choose,
And paid a visit to the Muse;
She kindly showed me through the shop,
All from the bottom to the top;
And there, in order due displayed,
Explained her different tools of trade.
I saw the anvil and the bellows,
The hammers—rare old stalwart fellows;
I marked the new self-acting planes
That smoothe and level without pains,
And much the process did admire
That spins a bar to miles of wire;
There, likewise, fastened to the flooring,
Were plenty of machines for bor(e)ing;
And high amid the rafters dusty,
The brave old models growing rusty.

I watched the process for awhile—
At length I asked her, "Where's the *file*?"
"The file!" the lady answered; "bah!
Nous avons changé tout cela;
This, my young greenhorn, is, you see,
The era of machinery.
As for the files, we've never missed 'em—
We go on quite a different system;
And our advantage is, that then
Boys do the work instead of men."

ROBERT FERGUSON.

VARIETIES.

Royal Academy.—The late respected president of the Academy, Sir Martin Archer Shee, died during the week, after a lingering illness, at a good old age. He was the successor of Sir Thomas Lawrence, and united with his talents as a painter the most refined qualities of the gentleman and the scholar. We shall hope to afford a more detailed account of his interesting career in our next.

Mr. P. Hardwick has been appointed treasurer, in the room of Sir Robert Smirke, resigned in consequence of continued indisposition.

Royal Botanic Society.—At the anniversary on Saturday, the 10th, Mr. M. Ure in the chair, a satisfactory report from the council was read. The statement of the affairs of the society displayed a great increase of prosperity, and was received with much satisfaction. 129,594 persons had visited the gardens during the year ending on the 1st of August, and several works of importance had been undertaken during the season, among which was a hothouse, erected especially for the cultivation of the Victoria Regia, lately introduced from South America. The auditors' report of the receipts and expenditure exhibited a considerable increase of income as compared with preceding years. The total receipts had amounted to 14,180*l.* 16s., of which the expenditure fell short by 3,700*l.* 9s. 2d. the amount of the balance in hand at the date of the report, and which sum nearly doubled the general liabilities of the institution. The sum subscribed by the Fellows upon the debentures of the society for the formation of the gardens and the redemption of its debts was 18,550*l.* The following noblemen and gentlemen were elected into the council for the year 1851:—The Duke of Beaufort, Sir Edward Kerrison, Mr. J. Olive, Mr. J. Hardwicke, Mr. J. Heywood, M.P., the Bishop of Durham, Lord Sondes, and Viscount Hardinge. The Duke of Norfolk was re-elected president, and Mr. E. Marjoribanks, treasurer; and the thanks of the Fellows having been voted to the council and officers, the meeting separated.

Mr. T. M. Mudie gave a performance of his own pianoforte compositions on Thursday last, at the new Beethoven Rooms.

LITERARY NOVELTIES.

LIST OF NEW BOOKS.

Anderdon's (W. H.) Words from the Cross, third edition, 12mo, cloth, 3s.
Arnold's (T. K.) Handbook of Modern Geography and History, 12mo, cloth, 5s. 6d.
Art of Verse, 8vo, cloth, 2s. 6d.
Bacon's Novum Organum, in English, new edition, 12mo, cloth, 5s.
Beatson's Exercises for Greek Prose Composition, third edition, 12mo, cloth, 4s. 6d.
Bickersteth's Family Prayers, fifth edition, 12mo, cloth, 5s.

Brothers (The); or, The Family that Lived in the First Society, 2 vols. post 8vo, 21s.
Gray's (Mrs.) Emperors of Rome, 12mo, cloth, 8s.
Harris's Pre-Adamite Earth, second edition, 8vo, cloth, 8s. 6d.
Hasting's (J.) Treatise on Diseases of the Larynx, &c., 8vo, cloth, 5s.
Holt's (D.) Lay of Hero Worship, 12mo, cloth, 4s.
Howson and Conybeare's Life and Epistles of Saint Paul, Vol. 1, Part 1, 4to, cloth, 17s.
Latrobe's Sacred Lays and Lyrics, square, cloth, 6s.
Lee on the Rhenish Waters, post 8vo, cloth, 4s.
Legge's (Rev. J.) Christianity in Harmony with Man's Nature, post 8vo, cloth, 3s. 6d.
Lenaghan's (P.) Treatise on Legacy Duties, 8vo, boards., 4s.
Loudon's (Mrs.) Ladies' Companion, vol. 1, cloth, 10s.
Metropolitan Interments Act, with Notes by G. H. H. Oliphant, post 8vo, boards, 3s.
Saint George for England, 8vo, cloth, 5s. 6d.
Sears' (A.) French Grammatical Course, complete, 12mo, cloth, 5s.
Sears' (A.) French Conversational Course, 12mo, cloth, 2s.
——— Grammatical Course, 12mo, cloth, 2s.
——— Reading, 12mo, cloth, 2s.
Sedgwick's (A.) Discourse on Studies of the University of Cambridge, post 8vo, cloth, 12s.
Spillin.'s (J.) Spirit of the Seasons, and other Poems, 12mo, cloth, 2s. 6d.
Stories of Old Daniel, thirteenth edition, 12mo, cloth, 4s. 6d.
Swiss Family Robinson, vol. 1, 14th edition, 12mo, cl., 5s.
Tate (Thomas) on the Strength of Materials, 8vo, cl., 5s. 6d.
Warter's (Rev. J. W.) Plain Christian's Manual, 18mo, cloth, 2s., 12mo, cloth, 3s. 6d.
Young's (J. R.) Introductory Treatise on Mensuration, 12mo, cloth, 4s.

DENT'S TABLE FOR THE EQUATION OF TIME.

[This table shows the time which a clock or watch should indicate when the sun is on the meridian.]

1850.	h. m. s.	1850.	h. m. s.
Aug. 24 . . .	12 2 12·7	Aug. 28 . . .	12 1 6·1
25 . . .	— 1 56·6	29 . . .	— 0 48·6
26 . . .	— 1 40·2	30 . . .	— 0 30·7
27 . . .	— 1 23·3		

TO CORRESPONDENTS.

"Per actum, intentio," is good heraldic Latin, of clear and sufficient meaning—Judge of, or rather, I will show my motives by my actions.

ADVERTISEMENTS.

THE NEW HAIR BRUSHES.—Have you seen the new Hair Brushes yet? They are called BAKER'S SINE MANUBRIUM BRUSHES, from their being without a handle. They are in form oval, the hairs being placed transversely; they answer the purpose of a comb and four different brushes, viz., a hard brush, two medium brushes, and a soft brush. All the principal perfumers at first sight have ordered a supply. They are registered, and sold at prices to suit the prince and the peasant. One sight of them must satisfy every sensible person that it is the best hair brush ever invented. Address Mr. Baker, 3, Murray Street, Hoxton, or at the Jerusalem, Cornhill.

TOOTHACHE PERMANENTLY CURED by using BRANDE'S ENAMEL for filling decaying Teeth, and rendering them sound and painless. Price 1s. Enough for several Teeth. The only substance approved by the medical faculty, as being unattended with pain or danger, and the good effects of which are permanent.

Sold by all Chemists in the United Kingdom. Twenty really authorized Testimonials accompany each box, with full directions for use. Sent free, by return of post, by J. WILLIS, 24, EAST TEMPLE CHAMBERS, WHITEFRIARS, FLEET STREET, LONDON, in return for thirteen penny stamps.

CAUTION.—The great success of this preparation has induced numerous unskilful persons to produce spurious imitations, and to Copy BRANDE'S ENAMEL Advertisements. It is needful, therefore, to guard against such impositions, by seeing that the name of JOHN WILLIS accompanies each packet.

REMOVE THE CAUSE AND THE EFFECT WILL CEASE.

INDIGESTION is the cause of nearly all the Diseases to which we are subject; and the most certain and safe remedy for Indigestion, and all Stomach Complaints, is NORTON'S CAMOMILE PILLS, a medicine so uniformly grateful and beneficial, that it is with justice called the "Natural Strengthener of the Human Stomach." They speedily remove all the distressing symptoms attendant upon a disordered state of the stomach and biliary organs, and are infallible for sick head-ache, flatulent distensions, and acidity of the stomach, depressed spirits, disturbed sleep, violent palpitations, irregular appetite, general debility, spasms, costiveness, &c. Sold in Bottles, price 1s. 1½d., 2s. 9d., or 11s. each, in every town in the kingdom. —CAUTION. Be sure to ask for "NORTON'S PILLS," and do not be persuaded to purchase any of the various imitations which have sprung up in consequence of the success of Norton's Camomile Pills.

Sales by Auction.

LIBRARY OF THE LATE REV. DR. JOHNSON, RECTOR OF PERRAN-UTHNOE, CORNWALL.

PUTTICK AND SIMPSON, Auctioneers of Literary Property, will SELL by AUCTION, at their Great Room, 191, Piccadilly, on Monday, September the 2nd, and Three following Days, the Library of the late Rev. Dr. Johnson, consisting of a good collection of Theological and Miscellaneous Books; a copy of Walton's Polyglott, 8 vols.; Critici Sacri, 9 vols.; Chrysostomi Opera, ed. H. Saville, 8 vols.; Oriental MSS., &c.—Catalogues will be sent on application.

PERIODICAL SALES FOR 1850, (ESTABLISHED IN 1803,) OF REVERSIONS, LIFE INTERESTS, ANNUITIES, POLICIES OF ASSURANCE, ADVOWSONS, NEXT PRESENTATIONS, RENT CHARGES IN LIEU OF TITHES, POST OBIT BONDS, TONTINES, DEBENTURES, GROUND RENTS, IMPROVED RENTS, SHARES IN DOCKS, CANALS, MINES, RAILWAYS, INSURANCE COMPANIES, AND ALL PUBLIC UNDERTAKINGS.

MESSRS. SHUTTLEWORTH and SONS respectfully inform the public that upwards of 47 years' experience having proved the classification of this species of property to be extremely advantageous and economical to vendors, and equally satisfactory and convenient to purchasers, the PERIODICAL SALES of REVERSIONARY INTERESTS, policies of insurance, tontines, debentures, advowsons, next presentations, and securities dependent upon human life, shares in docks, canals, mines, railways, and all public undertakings, will be continued throughout 1850, as follows:—

Friday, September 6.	Friday, November 1.
Friday, October 4.	Friday, December 6.

Particulars may be had, ten days previous to the sale, at the Auction Mart; and of Messrs. Shuttleworth and Sons, 28, Poultry.

PERIODICAL SALE: ESTABLISHED 1803.

MESSRS. SHUTTLEWORTH and SONS will SELL by AUCTION, at the Mart, on Friday, September 6th, at 12, by order of the Assignees, a POLICY of £3,940, effected with the Eagle Life Assurance Company, July 10th, 1829, upon the life of a gentleman now aged 57; and a POLICY for £3,200, effected with the Protector, November 26th, 1840, but since transferred to the Eagle Life Assurance Company, on the life of a gentleman now in the — year of his Age. Particulars may be had of Edward Edwards, Esq., official assignee, Frederick's Place, Old Jewry; of Mr. Thomas Parker, solicitor, St. Paul's Churchyard; at the Mart; and of Messrs. Shuttleworth and Sons, 28, Poultry.

PERIODICAL SALE: ESTABLISHED 1803.

MESSRS. SHUTTLEWORTH and SONS will SELL by AUCTION, at the Mart, on Friday, September 6th, at 12, the REVERSION to ONE-THIRD PART or SHARE of the SUM of £5,776 3s. 6d. Three per Cent. Consolidated Bank Annuities, standing in the names of highly respectable trustees, and to which the purchaser will be entitled provided a gentleman, now aged 49, shall survive a lady aged 68; and a further Share or Shares in such Trust Funds, to which the purchaser will be entitled in the event of a gentleman aged 46, and a lady aged 45, or either of them, dying in the lifetime of the lady aged 68, if the gentleman aged 49 should be living at her death. Particulars may be had of Messrs. Reynolds and Palmer, solicitors, Great Yarmouth, Norfolk; of Messrs. Clarke, Gray, and Woodcock, solicitors, 20, Lincoln's Inn Fields; at the Mart; and of Messrs. Shuttleworth and Sons, 28, Poultry.

PERIODICAL SALE; ESTABLISHED 1803—IMPORTANT REVERSIONARY INTEREST IN £39,590 CONSOLS.

MESSRS. SHUTTLEWORTH and SONS will SELL by AUCTION, at the Mart, on Friday, September 6, at 12, in three lots, the REVERSION to ONE-NINTH of £39,590 Consols, standing in the name of highly respectable trustees, and to which the purchaser will be entitled upon the decease of a gentleman aged 76, provided he has no issue by his present wife aged 40, or in case of her death, having issue, should he marry again. Particulars may be had of Mr. H. D. Warter, Solicitor, 1, Carey Street, Lincoln's Inn; at the Mart; and of Messrs. Shuttleworth and Sons, 28, Poultry.

PERIODICAL SALE: ESTABLISHED 1803.

MESSRS. SHUTTLEWORTH and SONS are instructed to include in their next sale of reversionary interest, &c., at the Mart, on Friday, September 6, at 12, the ABSOLUTE REVERSION to £400, New South Sea Stock, part of a larger sum, standing in the names of highly respectable trustees, and to which the purchaser will be entitled on the decease of a lady now in the 79th year of her age; also a Policy for the sum of £200, effected with the British Commercial Insurance Office, on the life of a gentleman now in his 53rd year. Particulars may be obtained of Messrs. J. and C. Robertson, solicitors, 7, Queen Street Place; of Mr. Minchin, solicitor, Portsea, Hants; at the Mart; and of Messrs. Shuttleworth and Sons, 28, Poultry.

BROADSTAIRS, ISLE OF THANET.—TO BE LET, FURNISHED, FOR THREE MONTHS OR FOR THE SEASON, OR WILL BE DISPOSED OF BY PRIVATE TREATY, AN ELEGANT MARINE RESIDENCE, WITH EXTENSIVE AND BEAUTIFUL GROUNDS, IN THE ABOVE FAVOURITE VICINITY.

MR. LEIFCHILD is instructed to LET, for Three Months, or the remainder of the Season, the justly-admired Mansion known as PIERREMONT, with its appropriate Furniture. The domestic accommodations include twelve excellent bed rooms, four servants' chambers, dressing rooms, closets, elegant drawing room, dining room, breakfast room, and library, with detached billiard room; well-arranged domestic offices on the basement, all abundantly supplied with spring and soft water. The stabling contains two four-stall stables, double coach house, harness room, chaise house, loits, coachman's room, &c. The gardens and pleasure grounds extend over about fourteen acres, commanding the most extensive sea views, combined with the privacy of a country domain. The advantages of its elevated situation and salubrious air are too well acknowledged to require further description. The whole is in perfect order, and fit for immediate occupation. For terms and cards to view, apply only at Mr. Leifchild's offices, 62, Moorgate Street, London.

EMIGRATION.

THE UNIVERSAL EMIGRATION and COLONIZATION COMPANY'S FIRST PACKET SHIP, the JOHN GARROW, 844 Tons register, (Captain HAMILTON,) will positively SAIL from LIVERPOOL, on WEDNESDAY, August 28.

All the Company's Settlers who have already recorded, or are about to record, their desire to proceed by this opportunity, under the direction of GEORGE CATLIN, Esq., to the Company's First Settlement of NEW BRITAIN, in Milam County, N. Texas, must be at Liverpool by Monday Evening, August 26th, at latest, as all the baggage must be stowed on board on Tuesday. The Company's Agent, F. SABIT, Esq., 28, Moorfields, Liverpool, will register in his Office the Embarkation Certificate of each Passenger. He will be prepared to render every assistance, and to furnish whatever may be required, on the most moderate terms.

All applications for land and passage must be recorded at the Company's Office, before Saturday, August 17th, after which date the spare accommodation will be appropriated generally.

The Company's SECOND PACKET SHIP will most probably Sail early in October, and will be advertised as soon as a sufficient number of applications has been recorded to complete the necessary arrangements.

WM. ST. CLAIR TROTTER, *Secretary.*

ED. J. DENT, by distinct appointments, Watch and Clock Maker to the Queen, H.R.H. Prince Albert, and H.I.M. the Emperor of Russia, having greatly increased his stock of WATCHES and CLOCKS to meet the purchases made at this season of the year, most respectfully requests from the public an inspection of his various assortments. Ladies' gold watches, with gold dials, and jewelled in four holes, 8 gs. each; gentlemen's ditto, enamel dials, 10 gs.; youths' silver watches, 4 gs.; substantial and accurately-going silver lever watches, jewelled in four holes, 6 gs.—E. J. DENT, 82, Strand; 33, Cockspur Street; and 34, Royal Exchange, (Clock Tower Area.)

SOYER'S MAGIC STOVE.—This Lilliputian Cooking Apparatus—so highly extolled by the whole of the Press, weighing 3 lbs., and extensively patronised by all classes—with which a good dinner may be cooked in any part of the Globe, enabling persons to live well at a trifling expense, is now ready, and may be had of all respectable Ironmongers in Town or Country, and at No. 5, Charing Cross, where it may be seen in daily operation, price 35s.

HENDRIE'S PATENT PETROLINE SOAP has realized in practice all the promised beneficial effects on excoriations and eruptive affections of the cuticle. The "COSMETIC PETROLINE SOAP," for the habitual use of the toilet, is found to have an agreeable demulcent influence on the hands, and on the most delicate skin; or in the nursery, for infants. The "PETROLINE SHAVING SOAP" is peculiarly bland and balsamic, allaying the irritation felt in the employment of the ordinary alkaline compositions.

A more detergent antiseptic, with additional petroleum, named "DISPENSARY SOAP," is prepared for inveterate cuticular affections of long standing; and, from experience in several public schools, where it has been employed in washing children's heads, it has proved an efficient specific for, and a complete protection against, the troublesome complaint known as ringworm.

The Dispensary Soap, being at a moderate price, is available for all classes, and is used with great success in purifying linen after infectious diseases; indeed, the use of it may, in many cases of typhus and other contagions, be considered a beneficial antidote.

R. HENDRIE,
PERFUMER TO HER MAJESTY,
12 AND 13, TICHBORNE STREET, REGENT'S QUADRANT.

Assurance Companies.

PROVIDENT LIFE OFFICE,

50, REGENT STREET; CITY BRANCH, 2, ROYAL EXCHANGE BUILDINGS.

Established 1806.

POLICY HOLDERS' CAPITAL, £1,180,722.

ANNUAL INCOME £148,000. BONUSES DECLARED £743,000.

Claims paid since the establishment of the Office £1,886,000.

PRESIDENT.
The Right Honourable EARL GREY.

DIRECTORS.
FREDERICK SQUIRE, ESQ., *Chairman.*
WILLIAM HENRY STONE, ESQ., *Deputy-Chairman.*

Henry B. Alexander, Esq.
George Dacre, Esq.
Alexander Henderson, M.D.
William Judd, Esq.
Sir Richard D. King, Bart.
The Hon. Arthur Kinnaird.
Thomas Maugham, Esq.
William Ostler, Esq.
Apsley Pellatt, Esq.
George Round, Esq.
The Rev. James Sherman.
Capt. William J. Williams.

J. A. BEAUMONT, Esq., Managing Director.

Physician—JOHN MACLEAN, M.D., F.S.S., 29, Upper Montague-street, Montague-square.

NINETEEN-TWENTIETHS OF THE PROFITS ARE DIVIDED AMONG THE INSURED.

Examples of the Extinction of Premiums by the Surrender of Bonuses.

Date of Policy.	Sum Insured.	Original Premium.	Bonuses added subsequently, to be further increased annually.
	£	£ s. d.	£ s. d.
1806	2500	79 10 10 Extinguished	1222 2 0
1811	1000	33 19 2 ditto.	231 17 8
1818	1000	34 16 10 ditto.	114 18 10

Examples of Bonuses added to other Policies.

Policy No.	Date.	Sum Insured.	Bonuses added.	Total with additions, to be further increased.
		£	£ s. d.	£ s. d.
521	1807	900	982 12 1	1882 12 1
1174	1810	1200	1160 5 6	2360 5 6
3392	1820	5000	3558 17 8	8558 17 8

Prospectuses and full particulars may be obtained upon application to the Agents of the Office in all the principal towns of the United Kingdom, at the City Branch, and at the Head Office, No. 50, *Regent Street.*

CLERICAL, MEDICAL, AND GENERAL
LIFE ASSURANCE SOCIETY.

Established 1824.

NOTICE is hereby given that the USUAL DIVIDEND of FIVE PER CENT. (less INCOME TAX) on the paid-up capital on the Shares of the SOCIETY, will be payable at this Office on and after Tuesday, the 20th day of August inst.

AN ACT OF PARLIAMENT just obtained, enables this Society to GIVE IMPORTANT BENEFITS to PERSONS NOW ASSURING, the particulars of which are set forth in a REPORT, which can be obtained of any of the Society's Agents, or by applying to

GEO. H. PINCKARD, *Resident Secretary.*

99, Great Russell Street, Bloomsbury, London.

THE MONARCH
FIRE AND LIFE ASSURANCE COMPANY,

Established 1835.

ADELAIDE PLACE, LONDON BRIDGE.

Chairman—JOHN MUSGROVE, Esq. and Alderman.
Deputy-Chairman—JOHN KINNERSLEY HOOPER, Esq. and Alderman.

FIRE DEPARTMENT.—The Company effects Insurances upon all descriptions of property at moderate rates.

LIFE DEPARTMENT.—Policy holders have the guarantee of a large capital, and the additional advantage of participating in the profits derived from the Fire Assurance department.

GEORGE H. JAY, *Manager and Secretary.*

UNITED KINGDOM
LIFE ASSURANCE COMPANY,

Established by Act of Parliament in 1834.

8, WATERLOO PLACE, PALL MALL, LONDON; 97, GEORGE STREET, EDINBURGH; 12, ST. VINCENT PLACE, GLASGOW; 4, COLLEGE GREEN, DUBLIN.

LONDON BOARD.

Chairman—CHARLES GRAHAM, Esq.
Deputy-Chairman—CHARLES DOWNES, Esq.

H. Blair Avarne, Esq.
E. L. Boyd, Esq. Resident.
Charles B. Curtis, Esq.
William Fairlie, Esq.
D. Q. Henriques, Esq.
J. G. Henriques, Esq.
F. C. Maitland, Esq.
William Railton, Esq.
F. H. Thomson, Esq.
Thomas Thorby, Esq.

The bonus added to Policies from March, 1834, to the 31st December, 1847, is as follow:—

Sum Assured.	Time Assured.	Sum added to Policy in 1841.	Sum added to Policy in 1848.	Sum payable at Death.
£		£ s. d	£ s. d.	£ s. d.
5000	13 yrs. 10 mo.	638 6 8	797 10 0	6479 16 8
5000	1 year	.. ..	112 10 0	5112 10 0
1000	12 years	100 0 0	157 10 0	1257 10 0
1000	7 years	.. ..	157 10 0	1157 10 0
1000	1 year	.. ..	22 10 0	1022 10 0
500	12 years	50 0 0	78 15 0	628 15 0
500	4 years	.. ..	45 0 0	545 0 0
500	1 year	.. ..	11 5 0	511 5 0

The premiums, nevertheless, are on the most moderate scale, and only one-half need be paid for the first five years when the insurance is for life. Every information afforded on application to the Resident Director, No. 8, Waterloo Place, Pall Mall, London.

ECONOMIC
LIFE ASSURANCE SOCIETY.

The Rt. Hon. Sir T. FRANKLAND LEWIS, Bt., M.P., *Chairman.*

HENRY FREDERICK STEPHENSON, Esq., *Deputy-Chairman.*

ADVANTAGES.

The **lowest** rates of Premium on the **Mutual System.**

The whole of the Profits divided among the Assured every Fifth Year.

The sum of **£274,000** was added to Policies at the last Division, which produced an average Bonus of **£62½ per Cent.** on the Premiums paid.

Amount of Assurance Fund, **£970,000.** Income, **£170,000** per Annum.

Loans granted on such Policies as are purchaseable by the Society.

For particulars apply to

ALEXANDER MACDONALD, *Secretary.*

6, NEW BRIDGE STREET, BLACKFRIARS.

INSURANCE AGAINST RAILWAY ACCIDENTS by the RAILWAY PASSENGERS' ASSURANCE COMPANY: empowered by Act of Parliament, 12 and 13 Vic., cap. 40. Capital, One Million.

Chairman—JOHN DEAN PAUL, Esq.
Deputy-Chairman—G. BERKELEY HARRISON, Esq.

Travellers by railway can now obtain tickets at the principal railway stations to insure against accident during a single journey, irrespective of distance, for the following amounts:—

£1,000 in a 1st class carriage, at a premium of 3d.
£500 in a 2nd ditto ditto 2d.
£200 in a 3rd ditto ditto 1d.

For the convenience of frequent travellers, periodical tickets are also issued at the railway stations by the provincial agents, and at the Company's offices, 3, Old Broad Street, London, on the following terms:—

To insure £1,000, for 12 months, at a premium of 20s.
— £200, — — 5s.
With the option of travelling in any class carriage, and on any railway in the kingdom.

The total amount insured by any of the above tickets is payable in the event of death by railway accident, and proportionate compensation afforded in cases of personal injury.

N.B. In the recent serious accident at Liverpool 12 persons out of the large number who were injured were insured with this Company, and have since received compensation for the loss of time and medical expense; and by that on the Edinburgh and Glasgow Railway, on the 1st August, the Company have already received notice of injuries to several insured parties.

ALEXANDER BEATTIE, *Secretary.*

THE HIPPOPOTAMUS, presented to the Zoological Society of London, is EXHIBITED DAILY, from 1 to 6 o'clock, at their Gardens in the Regent's Park. The band of the First Life Guards will perform, by permission of Colonel Hall, every Saturday, at 4 o'clock. The Arab snake charmers, Jabar Abou Hajjab and Mohammed Abou Merwan, will also perform on Wednesday, Thursday, and Friday, at 4 o'clock and at 5 o'clock, weather permitting. Admission, 1s. each; Mondays, 6d.

EASTERN COUNTIES RAILWAY.

The following REDUCED RATES for PERIODICAL TICKETS are now in operation:—

Between LONDON and	First Class. Twelve Months.	First Class. Six Months.	First Class. Three Months.	Second Class. Twelve Months.	Second Class. Six Months.	Second Class. Three Months.
	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Mile End, Bow, Stratford	9 0	7 0	4 4	7 0	4 10	3 0
Forest Gate, Ilford, Lea Bridge, Tottenham	12 0	8 0	4 10	8 0	5 0	3 10
Marsh Lane, Water Lane	15 0	10 0	6 0	10 0	6 0	4 0
Edmonton	16 0	10 10	6 10	12 0	7 10	5 0
Ponder's End	18 0	11 0	7 0	14 0	8 10	5 10
Enfield, Romford	20 0	12 0	7 10	16 0	9 10	6 0
Waltham	21 0	12 12	8 0	17 0	10 0	7 0
Cheshunt	22 0	13 0	8 10	18 0	10 10	7 10
Broxbourne, Brentwood	25 0	15 0	9 0	20 0	12 0	8 0
St. Margaret's, Ware, Hertford, Roydon, Burnt Mill, Harlow, Sawbridgeworth, Ingatestone	28 0	16 16	9 10	22 0	13 10	9 5
Bishop's Stortford, Chelmsford	35 0	21 0	13 0	28 0	16 16	11 15
Stanstead, Elsenham, Newport, Audley End, Witham, Kelvedon, Maldon, Braintree	40 0	24 0	15 0	32 0	19 10	13 13
Chesterford, Whittlesford, Marks Tey, Shelford	45 0	27 0	17 0	36 0	21 10	15 0
Cambridge, Colchester	50 0	30 0	18 15	40 0	24 0	16 16
Ely	60 0	36 0	22 10	50	30 0	21 0
Woolwich, N. and S.	10 10	6	4 0	7 10	4 0	2 10

Applications to be addressed to Mr. DAVIS, Accountant, Bishopsgate Station. By order,

C. P. RONEY, *Secretary.*

Bishopsgate Station, July, 1850.

SOUTH EASTERN RAILWAY—CHEAP PLEASURE EXCURSIONS.

TO DOVER, FOLKESTONE, WESTENHANGER, and CANTERBURY, every Saturday, at 12.30, to return by the train leaving Dover at 11.45 A.M. on Monday. Fares, there and back—1st class, 20s.; 2nd class, 15s.; children under 12 years of age, 8s.

MARGATE and RAMSGATE to LONDON every morning, except Sunday, by the train leaving Margate at 10 minutes after 9 o'clock. Fares—1st class, 10s.; 2nd class, 7s.; children under 12 years, 4s.

TO RAMSGATE and MARGATE direct, in three hours, every day except Sunday, at half-past 12 o'clock, from the London Terminus of the SOUTH-EASTERN RAILWAY. Fares—1st class, 10s.; 2nd class, 7s.; children under 12 years, 4s. Compartments reserved for Families.

TO RAMSGATE and MARGATE direct, in three hours, every Saturday, at half-past 3 o'clock, from the London Terminus of the SOUTH-EASTERN RAILWAY, to return on Sunday evening or Monday morning. Fares (there and back)—3rd class, 10s.; 2nd class, 15s.; 1st class, 20s. Compartments reserved for Families.

EXHIBITION OF 1851.

NOTICE to EXHIBITORS is hereby given, that HER MAJESTY'S COMMISSIONERS have fixed the 31st of OCTOBER as the LAST DAY FOR RECEIVING APPLICATIONS FOR SPACE from the different LOCAL COMMITTEES of the United Kingdom, the Isle of Man, and the Channel Islands. Intending Exhibitors failing to give due and sufficient notice to the nearest Local Committee, cannot be assured that their claims for space will receive any consideration.

M. DIGBY WYATT, *Secretary*.

August 17, 1850.

TO FAMILIES, BOOK SOCIETIES, AND THE LIBRARIANS OF PUBLIC INSTITUTIONS.

ALL who desire to read or to promote the circulation of Works of sterling interest or merit, but who find it difficult to secure a prompt and sufficient supply, are recommended to obtain a prospectus of Mudie's Select Library, 28, Upper King Street, Bloomsbury Square.

This Library was arranged on its present plan, in order to meet the requirements of those Subscribers who prefer Works of History, Philosophy, Travel, &c., and who read only such Works of Fiction as are recommended by the reputation of their authors, or by their acknowledged literary merit. It is intended to sustain its present efficiency by the addition of nearly Twenty Thousand Volumes in the course of the ensuing season.

Single Subscription, One Guinea per annum. Family and Book Society Subscriptions, from Two to Fifty Guineas per annum.

CHARLES EDWARD MUDIE, 28, Upper King Street, Bloomsbury Square.

FREDERIC REEVE, PRINTER and LITHOGRAPHER, executes every description of work connected with Letterpress and Lithography, in the best style and at moderate charges. Illustrations of subjects in Natural History, Geology, Anatomy, Engineering, Architecture, &c., lithographed from nature or from drawings by Artists conversant with the various branches of science, and printed in black or colours. Landscapes, Views, Portraits, &c., completed for publication with artistic correctness from sketches however imperfect, and printed with one or more tints. Microscopic details, Maps, Plans, Sections, Writings, &c., engraved on Stone according to the method adopted in Germany, and printed with an effect little inferior to Steel.

N.B.—Estimates given for printing on the most reasonable scale.

5, Heathcock Court, Strand.

TO GENTLEMEN ABOUT TO PUBLISH.

HOPE and CO., Publishers, 16, Great Marlborough Street, undertake the PRINTING of BOOKS, PAMPHLETS, &c., in first-rate style, greatly under the usual charges. A Pamphlet, containing Specimens of Bookwork, with Prices,—a complete Author's Guide,—sent, post free, for 4d. The greatest attention is paid to the Publishing Department. Gentlemen will save nearly a half by employing HOPE and Co.

GEOLOGY.—Persons wishing to become acquainted with this interesting branch of Science, will find their studies greatly facilitated by means of Elementary Collections, which can be had at Two, Five, Ten, Twenty, or Fifty Guineas each, arranged and sold by Mr. TENNANT, (Mineralogist to Her Majesty,) 149, Strand, London.

A Collection for Five Guineas, which will illustrate the recent works on Geology, contains 200 Specimens, in a Mahogany Cabinet with five trays, viz.:—

MINERALS which are the components of rocks, or occasionally imbedded in them:—Quartz, Agate, Calcedony, Jasper, Garnet, Zeolite, Hornblende, Augite, Asbestus, Felspar, Mica, Talc, Tourmaline, Calcareous Spar, Fluor, Selenite, Baryta, Strontia, Salt, Sulphur, Plumbago, Bitumen, &c.

METALLIC ORES:—Iron, Manganese, Lead, Tin, Zinc, Copper, Antimony, Silver, Gold, Platina, &c.

ROCKS:—Granite, Gneiss, Mica-slate, Clay-slate, Porphyry, Serpentine, Sandstones, Limestones, Basalt, Lavas, &c.

FOSSILS from the Llandeilo, Wenlock, Ludlow, Devonian, Carboniferous, Lias, Oolite, Wealden, Chalk, Plastic clay, London clay, and Crag Formations, &c.

Mr. TENNANT gives PRIVATE INSTRUCTION in MINERALOGY, with a view to facilitate the study of GEOLOGY, and of the application of Mineral Substances in the Arts, illustrated by an extensive Collection of Specimens, Models, &c.

Publications.

Now ready, with Maps and Plans,

MURRAY'S HANDBOOKS FOR TRAVELLERS.

1. HANDBOOK OF TRAVEL-TALK. 5s.
2. HANDBOOK of NORTH GERMANY, HOLLAND, and the RHINE. 12s.
3. HANDBOOK of SOUTH GERMANY and the TYROL. 12s.
4. HANDBOOK OF GERMAN and DUTCH PAINTING. 12s.
5. HANDBOOK of SWITZERLAND and the ALPS. 10s.
6. HANDBOOK OF FRANCE and the PYRENEES. 12s.
7. HANDBOOK OF SPAIN and ANDALUSIA. 16s.
8. HANDBOOK of FRENCH and SPANISH PAINTING. 12s.
9. HANDBOOK OF NORTH ITALY and FLORENCE. 12s.
10. HANDBOOK of CENTRAL ITALY and ROME. 16s.
11. HANDBOOK of MALTA and the EAST. 15s.
12. HANDBOOK of EGYPT, THEBES, INDIA, &c. 15s.
13. HANDBOOK of NORTH EUROPE, RUSSIA, SWEDEN and DENMARK. 24s.
14. HANDBOOK OF LONDON. 16s.

Also, next week,

15. HANDBOOK OF DEVON AND CORNWALL.

John Murray, Albemarle Street.

COMPLETION OF THE ZOOLOGY OF THE VOYAGE OF H.M.S. SAMARANG.

On the 31st inst. will be published, (under the Authority of the Lords Commissioners of the Admiralty,)

ZOOLOGY OF THE VOYAGE OF H.M.S. SAMARANG. Edited by ARTHUR ADAMS, F.L.S., Assistant-Surgeon, R.N., attached to the Expedition. Complete in one handsome royal 4to volume, containing 55 plates, mostly coloured. Price, strongly bound in cloth, £3 10s.

VERTEBRATA. By JOHN EDWARD GRAY, F.R.S., Keeper of the Zoological Department of the British Museum.

FISHES. By Sir JOHN RICHARDSON, M.D., F.R.S.

MOLLUSCA. By the EDITOR and LOVELL REEVE, F.L.S. Including the anatomy of the *Spirula*, by Professor OWEN, F.R.S.

CRUSTACEA. By the EDITOR and ADAM WHITE, F.L.S.

Reeve and Benham, 5, Henrietta Street, Covent Garden.

Two Vols. 8vo, 21s.,

CAPTAIN CHAMIER'S REVIEW of the FRENCH REVOLUTION, from the 24th February to the Election of the First President.

"Captain Chamier's book is in general the most accurate and judicious, as well as amusing History of the Revolution which we have yet seen."—*Quarterly Review*.

Reeve and Benham, 5, Henrietta Street, Covent Garden.

NEW WORK ON CONSUMPTION.

Just published, Second Edition, enlarged, 8vo, cloth, price 4s.,

AN INQUIRY how far CONSUMPTION is CURABLE, with Observations on the Treatment, and on the use of Cod Liver Oil, and other remedies; with Cases. By J. TURNBULL, M.D., Physician to the Liverpool Infirmary, &c.

"Dr. Turnbull's remarks upon treatment appear to us to be extremely judicious."—*Dublin Medical Press*.

London: John Churchill, Princes Street, Soho.

NEW AND ENLARGED EDITION OF PROFESSOR SEDGWICK'S DISCOURSE.

This day, in One Thick Volume, crown octavo, 12s., the Fifth Edition of a

DISCOURSE on the STUDIES of the UNIVERSITY of CAMBRIDGE. By ADAM SEDGWICK, M.A., F.R.S., Woodwardian Professor, and Fellow of Trinity College.

*** The present Edition is enlarged by the addition of a Preliminary Dissertation and Supplement; and consists, altogether, of 770 pages.

London: John W. Parker. Cambridge: John Deighton.

MR. HENEAGE JESSE'S NEW WORK.

On Monday will be published, in Two Vols. 8vo,

LONDON & ITS CELEBRITIES.

By J. HENEAGE JESSE, Esq.

Author of "England under the Court of the Stuarts," &c.

Richard Bentley, New Burlington Street, Publisher in Ordinary to Her Majesty.

On Tuesday will be published, in Three Vols. post 8vo,

LIFE IN AUSTRIA & HUNGARY.

FROM THE GERMAN.

BY MARY NORMAN.

Richard Bentley, New Burlington Street.

This day is published, in post 8vo, sewed, 1s.,

THE MOSAIC SABBATH; or, an Inquiry into the supposed present obligation of the Sabbath of the Fourth Commandment. By a LAYMAN, Author of "The Sabbath, or an examination of the Six Texts, commonly adduced from the New Testament, in proof of a Christian Sabbath."

London: Chapman and Hall, 186, Strand.

Just published, in 2 vols. post 8vo, cloth, 18s.,

ALTON LOCKE, TAILOR AND POET. An AUTOBIOGRAPHY. Forming the new Volumes of Chapman and Hall's Series of Original Works.

London: Chapman and Hall, 186, Strand.

JOYCE'S CATECHISM OF NATURE.

New edition, bound in cloth, price 1s.,

THE CATECHISM of NATURE: for the Use of Schools. Corrected by the Rev. J. JOYCE. Nineteenth edition. Improved and much enlarged, by D. H. CAMPBELL, Esq.

"I have revised the whole work, added notes, and substituted for the classification of Linnæus, the modern and more acceptable one of Lamarch, Cuvier, Lindley, Kirby, &c.; with a short chapter on Geology."—*Preface*.

London: William Tegg and Co., 85, Queen Street, Cheapside.

PROFESSOR YOUNG'S MENSURATION.

Just published, in 12mo, price 4s., cloth,

AN INTRODUCTORY TREATISE on MENSURATION, intended for the Use of Schools and Private Students. By J. R. YOUNG, late Professor of Mathematics in the Royal Belfast Academical Institution, Author of "A Treatise on Algebra," "Elements of Geometry," &c. &c.

Simms and M'Intyre, 13, Paternoster Row, London; and Donegall Street, Belfast.

SAINT PATRICK'S BELL.

Just published, and dedicated to her Majesty, in imperial 4to, price 12s., containing five elaborately-tinted plates, printed in Gold, Silver, and Colours, being Fac-similes of an

ANCIENT IRISH ECCLESIASTICAL BELL, which belonged to SAINT PATRICK, and afterwards to SAINT COLUMB-KILLE; also the Four Sides of the JEWELLED SHRINE in which it is preserved; accompanied by a HISTORICAL and DESCRIPTIVE ESSAY. By the Rev. WILLIAM REEVES, D.D., M.R.I.A., Ballymena.

London: Thomas Hodgson, 13, Paternoster Row. Dublin: Hodges and Smith. Belfast: Marcus Ward and Co.

In scarlet cloth, 12mo, price 5s.,

EMBLEMS of SAINTS; by which they are distinguished in Works of Art. By the Rev. F. C. HUSENBETH.

London: Burns and Lambert, 17, Portman Street.

This day is published, elegantly bound in cloth, with gilt edges, in a style suitable for a present, price 2s. 6d.,

THOUGHTS for HOME, in Prose and Verse. By Mrs. THOMAS GELDART.

By the same Author,

TRUTH IS EVERYTHING. Price 2s. 6d.

Hall and Co., London; J. Fletcher, Norwich.

London: Printed by THOMAS CHOATE SAVILL, at his Printing-office, No. 4, Chandos Street, in the Parish of Saint Paul, Covent Garden, in the County of Middlesex; and published by WILLIAM DANIEL GEARY, of No. 179, Albany Road, Camberwell, in the County of Surrey, at the LITERARY GAZETTE OFFICE, No. 3, *Tavistock Street, Covent Garden*.—Saturday, August 24, 1850.